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TABLE	<u>ш</u>	,						A Line of Amin's Trunk by " Protein	rotein	Name of protein identified following a Similiarity	$\vdash$	Мар
Seq ID	Seq ID CuraGen Base sequence ID pos. of SNP	Base pos. of SNP	Polymorphic sequence	Base before a	after a	acid before	after	change	atio	classificatio BLASTX analysis of the CuraGen n of sequence CuraGen gene	(pValue) following a BLASTX analysis	location
										Con Chilespant.	0	19
4-	cg43333349	1008	CGCTGACAGGGG A AGTCTGAGCCACA		U	Gln	Glu	SILENT- CODING	A1 Pase_as sociated	sociated ID:P20648 POTASSIUM- TRANSPORTING ATPASE ALPHA		
			[A/G]ACCCGCTCA CCCGAGTGCACG	-						CHAIN (EC 3.6.1.36) (PROTON PUMP) (GASTRIC H+/K+ ATPASE		
			CACG	· ·						ALPHA SUBUNIT) - HOMO SAPIENS (HUMAN), 1035 aa.		:
					+	- L	- Pr	SII FNT-	cadherin	Human Gene SWISSPROT-	0	3
2	cg43931765	2296	ATGGATAGTCCAT A CTGGTTGGATGC	∢	_		<u> </u>	CODING		ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.		*
			TGGCCTCGTTCAG									
			GT		_							

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	Human Gene SWISSNEW- ID:P13591 NEURAL CELL ADHESION MOLECULE, 140 KD ISOFORM PRECURSOR (N-CAM 140) (NCAM-140) (CD56 ANTIGEN) - HOMO SAPIENS (HUMAN), 848 aa. Ipcls:SWISSPROT-ID:P13591 NEURAL CELL ADHESION MOLECULE, 140 KD ISOFORM MOLECULE, 140 KD ISOFORM PRECURSOR (N-CAM 140) (NCAM- 140) (CD56 ANTIGEN) - HOMO SAPIENS (HUMAN), 848 aa.	Human Gene SWISSNEW- ID:Q08554 DESMOCOLLIN 1A/1B PRECURSOR (DESMOSOMAL GLYCOPROTEIN 2/3) (DG2/DG3) - HOMO SAPIENS (HUMAN), 894 aa.  pcls:SWISSPROT-ID:Q08554 DESMOCOLLIN 1A/1B PRECURSOR (DESMOSOMAL GLYCOPROTEIN 2/3) (DG2 / DG3) - HOMO SAPIENS (HUMAN), 894 aa.	
	cadherin	cadherin	
	SILENT- CODING	SILENT- CODING	
	Val	Thr	_
	\sqr	± Th	_
Hard Carl Man Chair War II	O	O	
11 GH M		4	
····	AATACAAAGCTGA T GTGGAGAGCAGT[ TGJGGTGAAGAAG TATGGCATTCCAA GT	TATTGTTATTATGT A ATTCTGTTTAC[A/ GJTGTTTCTGTGTC ACTGCTAAGAGAA	
	1832	2330	
	cg44130533	cg34888922	
	r	4	

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	· ·	17 (17q21.3 2)	17 (17q21.3 2)	17 (17q21.3 2)
		0	0	0
	Human Gene SWISSNEW- ID:Q08554 DESMOCOLLIN 1A/1B PRECURSOR (DESMOSOMAL GLYCOPROTEIN 2/3) (DG2/DG3) - HOMO SAPIENS (HUMAN), 894 aa. Ipcls:SWISSPROT-ID:Q08554 DESMOCOLLIN 1A/1B PRECURSOR (DESMOSOMAL GLYCOPROTEIN 2/3) (DG2 / DG3) - HOMO SAPIENS (HUMAN), 894 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.
:: 054	cadherin	cadherin	cadherin	cadherin
	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
i 673 mil 117	Tyr	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Ala	Ser
#	īĶ.	Val	Ala	Ser
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	CAAGGAGCATTGA CCGTGAGAAATA[ C/TJGAACAGTTTG CGTTATATGGCTA TG	TGGCGTCGTATTT TGGCCATTCAGT[ G/C]GCTGTCACTG ACGTCAACGGGG	AGGGGGCCTATG (AAGCAGAGCTGG CIC/GJGTGCACCT GCCCAGGGCGC	GTTACTGTGAAGC GGGCTTCAGCTC C/GJGTGGTCACTC AGGCCGGAGAGC TGG
		1172	2243	812
	cg34888922 815	cg40310734 1	cg40310734 2	cg40310734
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22 33 33 1786	cg43331935 19 cg42388009 36 cg42388009 3	I IIII	GTGACAAGTACTT G T GIY GIY SILEN I- CAUTER II- CAUTER II	T Asn Asn SILENT- cadherin	AAGGAGAAACAA C CODING TGAAGAACGAAG C/TJGAAGACGAAG ACTCTGAGGCTGA	risadice	AAAACAATGAAGA C T Asp Asp CODING ACCGAACGAAGA C T Asp ASP CODING	CATIGAAGATAC AGGCTGAGAATAC SIALOPROTEIN) - HOMO SAPIENS CA (HUMAN), 317 aa.	SILENT- cathepsin	CODING	
	100 100 100 100 100 100 100 100 100 100	1,,,,	GTGACAAGTACTT G CATAGAGGATGG[ G/TJCGCCTGGTCA	TCCACAGCCTGG ACT	AAGGAGAAAACAA TGAAGAACCGAA[ C/T]GAAGACGAAG ACTCTGAGGCTGA ACTCTGAGGCTGA		AAAACAATGAAGA ACCGAACGAAGA[	C/I JGAAGACIO CO AGGCTGAGAATAC CA			1100100000

	3 (3p21.3)	1 (1p32)	9 (9q34.3)		1 (1435)	Š	(1 (1p21)		
		0	1.40E-104		1.10E-69		5.00E-304   1 (1p21)		
	Human Gene SWISSPROT- 10:002388 COLLAGEN ALPHA 1(VII) CHAIN PRECURSOR (LONG-CHAIN COLLAGEN) (LC COLLAGEN) - HOMO SAPIENS (HUMAN), 2944 aa.	complement Human Gene SWISSPROT- ID:P07357 COMPLEMENT COMPONENT C8 ALPHA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 584 aa.	ologous to 07360	COMPLEMENT C8 GAMMA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 202 aa.	complement Human Gene Similar to	COMPLEMENT RECEPTOR 2 - MUS MUSCULUS (MOUSE), 651 aa (fragment).	Human Gene SWISSPROT-	COLONY STIMULATING FACTOR-1 PRECURSOR (CSF-1) (MCSF) - HOMO SAPIENS (HUMAN), 554 aa.	
	collagen	complement	complement		complement	ldecebi	csf		
that they must then also at the that that	SILENT- CODING	SILENT- CODING	SILENT-		SILENT-	CODING	SILENT-	CODING	
	Ser	Ala	Ala		<u>G</u>		Th.		_
	Ser	Ala	Ala		≥ Ö		je		
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<b>=</b>	GGACTCCAGTGT CCAGGGCATCCAGGCATCCAGGCCATCCTATCCT	ACGGGCAG ACCGCCAG GTTACCTG	CTGGT CTGGT TCTAGCCCAAGG	CCAATTTGATGC TGCAGCAGTTG	TCC	AGGIAGGAGGGC TTGGTCTCCAAAC [AGJCCTATTGTTT	GC	AACAGCCGGCAG ATGTAACTGGTAC [AVC]GCCTTGCCC	GTGA
		245		777		1371		1219	
	cg43970983 3066	cg44032748 24		cg41553795 2		cg43942011		cg21644442	
	13	41		15		16		17	

17 (17q11.2 )		(25)
1.50E-107   17 (17 (17 )	1.60E-266 11	2.00E-229
1.50E	1.60	2.008
Human Gene Homologous to SWISSPROT-ID:P09919 GRANULOCYTE COLONY- STIMULATING FACTOR PRECURSOR (G-CSF) (PLURIPOIETIN) - HOMO SAPIENS (HUMAN), 207 aa.		Human Gene SWISSPROT- ID:P45954 ACYL-COA DEHYDROGENASE, SHORT/BRANCHED CHAIN SPECIFIC PRECURSOR (EC 1.3.99) (SBCAD) (2-METHYL BRANCHED CHAIN ACYL-COA DEHYDROGENASE) (2-MEBCAD) - HOMO SAPIENS (HUMAN), 432 aa.
csf	dehydrogen ase	dehydrogen ase
SILENT- CODING	SILENT- CODING	SILENT- CODING
Leu	Pro	Ser
ne	o O	Ser
∢	O	<u> </u>
O	A	4
TCCAGCGCCGGG CAGGAGGGGTCC T[G/A]GTTGCCTC CCATCTGCAGAG CTTCC	ATGTGCCCACTGC A ATTGGGTTGTCC A AGIGGAGTTGATA CTGGTGGGATCA	CAGAATATGGAG GCACAGGAGCTT C[ATTTTTATCC ACTGTGCTCGTGA TAG
	1743	366
cg41533258 597	cg43996714	cg43259523
18	19	50

4 (4q22)			
1.30E-209 4 (4q22)	2.50E-103	2.50E-103	2.50E-103
dehydrogen Human Gene SWISSNEW- ase ID:P08319 ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (EC 1.1.1.1) - HOMO SAPIENS (HUMAN), 391 aa.lpcls:SWISSPROT-ID:P08319 ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (EC 1.1.1.1) - HOMO SAPIENS (HUMAN), 391 aa.	Human Gene Homologous to SPTREMBL-ID:Q92816 CYTOPLASMIC DYNEIN 3 HEAVY CHAIN - HOMO SAPIENS (HUMAN), 197 aa (fragment).	Human Gene Homologous to SPTREMBL-ID:Q92816 CYTOPLASMIC DYNEIN 3 HEAVY CHAIN - HOMO SAPIENS (HUMAN), 197 aa (fragment).	Human Gene Homologous to SPTREMBL-ID:Q92816 CYTOPLASMIC DYNEIN 3 HEAVY CHAIN - HOMO SAPIENS (HUMAN), 197 aa (fragment).
dehydrogen ase	dynein	dynein	dynein
Leu SILENT- de CODING a	SILENT- CODING	SILENT- CODING	SILENT- CODING
nen	Thr	Lys	ren
leu leu	Th.	Lys	ren
<b>I</b>	o	o	<b>-</b>
O	∢	4	U
GAATAAGAAATTC AATCTGGATGCA[ C/TJTGGTGACCCA TACCCTGCCTTTT GA	GTGCTCCAGAGG GGCCAGCAGGCA C[A/G]GGAAAAAC CGAAACCACCAA	CAGAGGGGCCAG A CAGGCACAGGAA A[A/G]ACCGAAAC CACCAAGGACTTG	GCIA AGCAATGGGAAA GTTTTTAAAGGA[ C/IJTGGCTTCTTC TGGTGCTTGGGC
1528	430	436	542
cg43057018 1	cg1395871	cg1395871	cg1395871
27	22	23	24

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		16	2	
2 50E-103			1.00E-104 5	
	Human Gene Homologous to SPTREMBL-ID:Q92816 CYTOPLASMIC DYNEIN 3 HEAVY CHAIN - HOMO SAPIENS (HUMAN), 197 aa (fragment).	Human Gene TREMBLNEW- ID:G2865466 HEAT SHOCK PROTEIN 75 - HOMO SAPIENS (HUMAN), 649 aa.	The Completion of State Homologonis to	IEAT- OCCUS :500 IEAT- OCCUS
	dynein	ebh		C. O.
	SILENT- CODING	SILENT- CODING	 	CODING
	Phe	Asp		Arg
	Phe	Asp		Arg
	<b>-</b>	4		<b>-</b>
	O	ပ		O
	CTTCTTCTGGTGC C TTGGGCTTGCTT[ CTTGATGAATTCA ACCGGATTGAGTT	GG AGCGCCCACCA TGCCCTAGGGT CIG/AJTCCAACAAGT	TGG	CCGATGGCTATGA GCAGGCTGCTCG[ C/T]GTTGCTATTG AACACCTGGACAA GA
	571	1269		461
	cg1395871	cg43950268		cg43918531
	25	26		27

1.90E-178	
Human Gene SWISSNEW- ID:Q15166 SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A- ESTERASE 3) (AROMATIC ESTERASE 3) - HOMO SAPIENS (HUMAN), 341 aa (fragment). Ipcls:SWISSPROT- ID:Q15166 SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A- ESTERASE 3) - HOMO SAPIENS (HUMAN), 341 aa (fragment).	
esterase	
SILENT- CODING	
Olo Olo	_
<u>n</u>	
-	
CAAGTTCCTCAAT C AAAGTGGCAGTT[ C/I]TCAGGTTCTA CTGGCTCCACTTC TC	
AAAA CAT TC TC	
1146	
cg43957743 1146	
58	

21	34)	5 (5q34)
	1.90E-256	1.30E-248
Human Gene Similar to SWISSNEW- 3.30E-60 ID:Q23917 3',5'-CYCLIC- NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.14.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa. pcls:SWISSPROT-ID:Q23917 3',5'-CYCLIC-NUCLEOTIDE PHOSPHODIESTERASE REGA (EC 3.14.17) (PDEASE REGA) - DICTYOSTELIUM DISCOIDEUM (SLIME MOLD), 793 aa.	Human Gene SWISSPROT- ID:P47870 GAMMA- AMINOBUTYRIC-ACID RECEPTOR BETA-2 SUBUNIT PRECURSOR (GABA(A) RECEPTOR) - HOMO SAPIENS (HUMAN), 474 aa.	Human Gene SWISSPROT- ID:P14867 GAMMA- AMINOBUTYRIC-ACID RECEPTOR ALPHA-1 SUBUNIT PRECURSOR (GABA(A) RECEPTOR) - HOMO SAPIENS (HUMAN), 456 aa.
esterase	gaba	gaba
Cys SILENT- 6 CODING	SILENT- CODING	SILENT- CODING
Cys	Tyr	Ąjg
δ	T Y	Ġ.
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IIII firm	U	O
TCACCCTCAGGA GGTGGCTGTTCT G[C/T]GTCCACGA CAACTACAGAAAC AACC	TCTTCAACATCGT CTATTGGCTTTA[C //ITATGTGAACTA AAACATGGCCTCC	GGATTTTGGACAG ACTCCTAGATGGI C/TJTATGACAATC GCCTGAGACCAG
	1631	370
cg43319420 963	cg3001932 1	cg43975899
29	30	31

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17 (17q25.2 )	17 (17q25.2 )	7 (7q21.11	5	15 (15q15)
7.40E-199   17 (17	7.40E-199		7.40E-80	
glucoamylas Human Gene TREMBLNEW- 7. glucoamylas Human Gene TREMBLNEW- 7. lD:G2826521 MALTASE- GLUCOAMYLASE (EC 3.2.1.20) - HOMO SAPIENS (HUMAN), 1857 aa.	glucoamylas Human Gene TREMBLNEW-7. e ID:G2826521 MALTASE-GLUCOAMYLASE (EC 3.2.1.20) - HOMO SAPIENS (HUMAN), 1857 aa.	glucuronida Human Gene SWISSPROT- se ID:P08236 BETA-GLUCURONIDASE PRECURSOR (EC 3.2.1.31) (BETA- G1) - HOMO SAPIENS (HUMAN), 651 aa.	Human Gene Similar to SWISSPROT-ID:P08236 BETA- GLUCURONIDASE PRECURSOR (EC 3.2.1.31) (BETA-G1) - HOMO SAPIENS (HUMAN), 651 aa.	glycoprotein Human Gene SWISSPROT- ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.
lucoamylas	glucoamylas e	glucuronida se	glucuronida se	glycoprotein
Gin Silent G	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
<u>Gin</u>	Arg	Tyr	¥	Ala
-	Arg	Tyr	Jý.	Ala
15 B B B B B B B B B B B B B B B B B B B	V	⋖	⋖	<
	O	(C)	Ø	<u>ග</u>
GGGCCCACTTCC A CCCTGGACGTCC A(A/G)TGGAACGA CCTGGACTACATG		AACA AATTCCAAATGAG CTCTCCAACCACI G/AJTATTTTCTGC GTTTTTGATCCAG	AC ATTCCAGATGAG CTCTCCAACCAC GAJTATTTCTGC GATTTTTGATCCAG	
1643	2021	443	325	880
cg43299024 1	cg43299024 2	cg43969076	cg43969014	cg43065549
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(15q15)			X (Xq28
			3.10E-249 X (Xq28)
Human Gerie Synool NOT ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.	Human Gene SWISSPROT- ID:012889 OVIDUCT-SPECIFIC GLYCOPROTEIN PRECURSOR (OVIDUCTAL GLYCOPROTEIN) (OVIDUCTIN) (ESTROGEN- DEPENDENT OVIDUCT PROTEIN)	HOMO SAPIENS (HUMAN), 678 aa. HUMAN GENE SWISSPROT- ID:Q12889 OVIDUCT-SPECIFIC GLYCOPROTEIN PRECURSOR (OVIDUCTAL GLYCOPROTEIN)	OTEIN) - 678 aa. OCYTE   1000
glycoprotein	glycoprotein	glycoprotein	glycoproteir
SILENT-	SILENT- CODING	SILENT- CODING	SILENT- CODING
Vai	\sqr	Lys	Th
Val	Val	Lys	Thr
ပ	F	-	U
	U	υ	4
ACCCCTGGAATAG AGAGGATGCTGT[ I/G]TTCCTGAAGA ATGAGGCTCAGC	GCA TGACGTCATCCAT GTCCAATGTCCAI C/TJACCATGGCCC CCCCAAAATGCTC	GAAGGGATATAAC TGAAGCAATAAAA CATTTTCACGGT	CA AGGACTGTTTTC ATTCAGCTTCAGIA /CJGTGATTCCCAT GGGCTCTTCTGTG A
			1677
g43065549 9			cg43957605
37	388		40
	cg43065549 991 ACCCCTGGAATAG T G Val SILENT- glycoprotein Human Gene SWISCL TO THROCYTE CODING MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.	CGG43065549   991   ACCCCTGGAATAG   T   G   Val   Val   CODING	CODING   CONTINUE   CONTINUE   CODING   CODING

2.00E-183 |1 (1q21)

1 (1921)	 	921)	
2.00E-183   1 (1q21)		6.70E-183	
	ID:PO6126 T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T- CELL SURFACE ANTIGEN T6/LEU- 6) (HTA1 THYMOCYTE ANTIGEN) - HOMO SAPIENS (HUMAN), 327 aa.lpcls:SWISSPROT-ID:P06126 T- CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL SURFACE ANTIGEN T6/LEU-6) (HTA1 THYMOCYTE ANTIGEN) - HOMO SAPIENS (HUMAN), 327 aa.	glycoprotein Human Gene SWISSNEW- ID:P29016 T-CELL SURFACE GLYCOPROTEIN CD18 PRECURSOR (CD18 ANTIGEN) - HOMO SAPIENS (HUMAN), 333 aa. pcis:SWISSPROT-ID:P29016 T- CELL SURFACE GLYCOPROTEIN CD18 PRECURSOR (CD18 ANTIGEN) - HOMO SAPIENS (HUMAN), 333 aa.	
lycoprotein		glycoprotei	
Total their trees the state of their trees.	- <u>-</u>	SILENT- CODING	
11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11.11 11	<u> </u>	l l l l l l l l l l l l l l l l l l l	
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Shart Vent Sires Areas Union	<u> </u>	6)	1
Starte	ATGTCTCAGGATT   C CTACCCAAAGCC[ CTGTGTGGGTGA TGTGGATGCGGG GTG GTG	TGGCAATAATAGT C GCCTTCCTTGCT[ C/TJCTTTTGCTAT GCCTTGCATTATG GT	
	1229	1210	
	cg40915005	cg40356255	
	14	42	

		N
	1 (1921)	14 (14q11.2 )
7.60E-127	1.60E-119 1 (1q21)	9.90E-70
glycoprotein Human Gene Homologous to SWISSNEW-ID:P01732 T-CELL SURFACE GLYCOPROTEIN CD8 ALPHA CHAIN PRECURSOR (T- LYMPHOCYTE DIFFERENTIATION ANTIGEN T8/LEU-2) - HOMO SAPIENS (HUMAN), 235 aa.lpcls:SWISSPROT-ID:P01732 T- CELL SURFACE GLYCOPROTEIN CD8 ALPHA CHAIN PRECURSOR (T-LYMPHOCYTE DIFFERENTIATION ANTIGEN T8/LEU-2) - HOMO SAPIENS (HUMAN), 235 aa.	glycoprotein Human Gene Homologous to SWISSPROT-ID:P02743 SERUM AMYLOID P-COMPONENT PRECURSOR (SAP) (9.5S ALPHA- 1-GLYCOPROTEIN) - HOMO SAPIENS (HUMAN), 223 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.
glycoprotein	glycoprotein	glycoprotein
SILENT- CODING	SILENT- CODING	SILENT.
ren	 	Qi Qi
Leu	\alpha al	<u>G</u>
<u> </u>	∢	∢
ပ	Ø	U
CTGTGATATCTAC C ATCTGGCGCGCC[ C/I]TGGCCGGGA CTTGTGGGGTCCT TCT	AGGGTCTGCGAC AGGGTTACTTTGT[ G/AJGAAGCTCAGC CCAAGATTGTCCT GG	ATGGCCAGTGCT GGGTCTTTGCTG G[C/A]GTGACCAC CACAGTGCTGCG CTGCC
	544	1242
cg44004667 1183	cg43068999	cg41568631
43	44	45

14 (14q11.2 )	1 (1922)	(25)	17	
9.90E-70	3.00E-52	3.00E-52	3.60E-120	4.30E-216
Human Gene Similar to SWISSPROT-ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.	glycoprotein Human Gene Similar to SPTREMBL- 3.00E-52 ID:Q91406 IP1=CNS MYELIN P0-LIKE GLYCOPROTEIN - UNKNOWN, 202 aa.	glycoprotein Human Gene Similar to SPTREMBL- 3.00E-52 ID:Q91406 IP1=CNS MYELIN P0- LIKE GLYCOPROTEIN - UNKNOWN, 202 aa.	Human Gene Homologous to SWISSPROT-ID:Q12099 PROBABLE ATP-DEPENDENT RNA HELICASE FAL1- SACCHAROMYCES CEREVISIAE (BAKER'S YEAST), 399 aa.	Human Gene SWISSPROT- ID:P50458 HOMEOBOX PROTEIN LH-2 - HOMO SAPIENS (HUMAN), 423 aa.
glycoprotein	glycoprotein	glycoprotein	helicase	homeobox
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
<u>Vi</u> D	Arg	Asn	Ala	Asn
<u>Š</u> i	Arg	Asn	Ala	Asn
<u>o</u>	<b>-</b>	ပ	ပ	<b>-</b>
ပ	U	Ţ	9	ပ
GCTCTGTGGAGT CCATCAAGAATGG [C/G]CTGGTCTAC ATGAAGTACGACA CGC	GCATCCAGTGGG TAGGGGACCCTC G[C/T]TGGAAGGA TGGCTCCATTGTC ATAC	TACACAACCTAGA CTACAGTGACAA[ T/CJGGCACGTTCA CTTGTGACGTCAA AA	AGTCCCTTCTCCG G TGCACCTACGC[ G/C]TATGGTTTG AGAAGCCCTCTG CCA	AGTCTTACTTTGC C CATTAACCACAA(C TJCCCGACGCCAA GGACTTGAAGCA GC
1545	361	409	465	1353
cg41568631 1545	cg41603916			cg43983917
46	47	48	49	20

	2			2 (2q21)
4.30E-216	2.60E-188	1.10E-123	1.30E-113	0
Human Gene SWISSPROT- ID:P50458 HOMEOBOX PROTEIN LH-2 - HOMO SAPIENS (HUMAN), 423 aa.	Human Gene SWISSPROT- ID:P28356 HOMEOBOX PROTEIN HOX-D9 (HOX-4C) (HOX-5.2) - HOMO SAPIENS (HUMAN), 342 aa.	Human Gene Homologous to SWISSPROT-ID:P17509 HOMEOBOX PROTEIN HOX-B6 (HOX-2B) (HOX-2.2) (HU-2) - HOMO SAPIENS (HUMAN), 224 aa.	Human Gene Homologous to SWISSPROT-ID:P09629 HOMEOBOX PROTEIN HOX-B7 (HOX-2C) (HHO.C1) - HOMO SAPIENS (HUMAN), 217 aa.	Human Gene SWISSPROT- ID: P09848 LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62) (LACTASE- GLYCOSYLCERAMIDASE) - HOMO SAPIENS (HUMAN), 1927 aa.
homeobox	нотеорох	<b>homeobox</b>	homeobox	hydrolase
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Asp	Ala	Lys	Lys	Arg
Asp	Ala	Lys	Lys	Arg
<b>—</b>	<b> </b> -	⋖	ပ	<b>ග</b>
ပ	O	ပ	<b>⊢</b>	∢
ACTTTGCCATTAA CCACAACCCGA[ C/TJGCCAAGGACT TGAAGCAGCTCG CGC	TGGAGCGAGCGT GGATCCAGTTCG C[G/T]GCGGGGTT GTTTGGGTCAAGT	GTTACCAGACGCT GGAGCTGGAGAQI G/AJGAGTTTCACT ACAATCGCTACCT GA	TCAGGTAGCGATT GTAGTGAAATTC[T /CJTTCTCCAGCTC CAGGGTCTGGTA GC	GGGAGCATITG CCAATCAGTCCAG [AGGCGGAAAGG GATGCCTTCCTGC AGG
1359	979	689	810	1124
cg43983917 1359	cg42730678	cg42714160	cg43959084	cg42359655
51	52	53	54	55

2 (2q21)	2 (2q21)	16 (16q22)	15
0		2.00E-220	0
Human Gene SWISSPROT- ID:P09848 LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62) (LACTASE- GLYCOSYLCERAMIDASE) - HOMO SAPIENS (HUMAN), 1927 aa.	Human Gene SWISSPROT- ID:P09848 LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62) (LACTASE- GLYCOSYLCERAMIDASE) - HOMO SAPIENS (HUMAN), 1927 aa.	Human Gene SPTREMBL- ID:Q13194 11-BETA- HYDROXYSTEROID DEHYDROGENASE TYPE 2 - HOMO SAPIENS (HUMAN), 405 aa.	Human Gene TREMBLNEW- ID:G2114410 INTERLEUKIN-16 - HOMO SAPIENS (HUMAN), 631 aa.
hydrolase	hydrolase	hydroxyster	interleukin
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
His S	<del>V</del>		Pro
흜	œj.	<al><li><al></al></li></al>	P.0
<b>-</b>	<b>-</b>	⋖	<b>⊢</b>
೮	O	ن د	ပ
ACAGCCAGCGGT TTGGCCTGCACCA [C/T]GTCAACTTCA GCGACAGCAGCA AGT	ATCTGGTCACCCT GCAGAACCTGGG C/TJGTGTCCCACT ACCGTTTTCCAT CT	TGGTGTGGGCCT TGGTGAACTCTAG [C/A]ACGCGGCTA ATGTCTCCTGGTT TGG	GGAAGCTGACTC CAGAGGCCATGC C[C/T]GACCTCAA CTCCTCCACTGAC TCTG
2468	4340	1329	1689
cg42359655 2468	cg42359655	cg43998672	cg43922672
26	22	28	65

7 (7p21)	5 (5p13)
3.40E-108 7 (7p21)	3.10E-249 5 (5p13)
interleukin Human Gene Homologous to SWISSPROT-ID:P05231 INTERLEUKIN-6 PRECURSOR (IL- 6) (B-CELL STIMULATORY FACTOR 2) (BSF-2) (INTERFERON BETA-2) (HYBRIDOMA GROWTH FACTOR) - HOMO SAPIENS (HUMAN), 212 aa.	interleukinre Human Gene SWISSNEW- Cept ID:P16871 INTERLEUKIN-7 RECEPTOR ALPHA CHAIN PRECURSOR (IL-7R-ALPHA) (CDW127) (CD127 ANTIGEN) - HOMO SAPIENS (HUMAN), 459 aa.[pcls:SWISSPROT-ID:P16871 INTERLEUKIN-7 RECEPTOR ALPHA CHAIN PRECURSOR (IL-7R-ALPHA) (CDW127) (CD127 ANTIGEN) - HOMO SAPIENS (HUMAN), 459 aa.
interleukin	interleukinre cept
SILENT- CODING	SILENT- CODING
\alpha al	Ξ. S
Val	His Si
ပ	<b>H</b>
ပ	O
GTAGTGAGGAAC G AAGCCAGAGCTG T[G/C]CAGATGAG TACAAAAGTCCTG ATCC	AGTTGGAAGTGAA C TGGATCGCAGCA[ C/IJTCACTGACCT GTGCTTTTGAGGA CC
	181
cg42908571 630	cg43942050
09	19

m	က	0
0	0	0
Human Gene SWISSNEW- ID:P42336 PHOSPHATIDYLINOSITOL 3- KINASE CATALYTIC SUBUNIT, ALPHA ISOFORM (EC 2.7.1.137) (P13-KINASE P110 SUBUNIT ALPHA) (PTDINS-3-KINASE P110) (P13K) - HOMO SAPIENS (HUMAN), 1068 aa. pcls:SWISSPROT- ID:P42336 PHOSPHATIDYLINOSITOL 3- KINASE CATALYTIC SUBUNIT, ALPHA ISOFORM (EC 2.7.1.137) (P13-KINASE P110 SUBUNIT ALPHA) (PTDINS-3-KINASE P110) (P13K) - HOMO SAPIENS (HUMAN), 1068 aa.	Human Gene SPTREMBL- ID:Q63553 SNF1-RELATED KINASE - RATTUS NORVEGICUS (RAT), 746 aa.	Human Gene SWISSPROT- ID:Q04759 PROTEIN KINASE C, THETA TYPE (EC 2.7.1) (NPKC- THETA) - HOMO SAPIENS (HUMAN), 706 aa.
kinase	kinase	kinase
SILENT- CODING	SILENT- CODING	SILENT- CODING
<b>=</b>	Asp	Phe
<u>e</u>	Asp	Phe
<b>—</b>	<b>—</b>	<b>—</b>
O	ပ	ပ
TAAATATTCGAGA CATTGACAAGAT C/IJTATGTTCGAA CAGGTATCTACCA TG	AGATCTTTGAGGA AGGGGAATCTGA[ C/TJGATGAGTTTG ACATGGATGAGAA TC	TTCTGACGCACAT GTTTTGTACATT[C /T]CAGACCAAGGA AACCTCTTTTT G
1249	1693	1438
l.a	cg43918241	cg43090990
62	63	64

21 (21q22.1 )	X (Xq21.3)	1 (1921)
0	0	9.80E-308 1 (1q21)
Human Gene SWISSPROT- ID:Q13627 SERINE/THREONINE- SPECIFIC PROTEIN KINASE MINIBRAIN HOMOLOG (EC 2.7.1) (HP86) (DYRK) - HOMO SAPIENS (HUMAN), 763 aa.	Human Gene SWISSPROT- ID:Q06187 TYROSINE-PROTEIN KINASE BTK (EC 2.7.1.112) (BRUTON'S TYROSINE KINASE) (AGAMMAGLOBULINAEMIA TYROSINE KINASE) (ATK) (B CELL PROGENITOR KINASE) (BPK) - HOMO SAPIENS (HUMAN), 659 aa.	Human Gene SPTREMBL- ID:Q16715 PYRUVATE KINASE (EC 2.7.1.40) - HOMO SAPIENS (HUMAN), 587 aa (fragment).
kinase	kinase	kinase
SILENT- kinase CODING	SILENT- CODING	SILENT- CODING
Lys	Cys	Arg
Lys	Cys	Arg
ق ع	ပ	ပ
⋖	<b>-</b>	∢
TTAGTATCATTCA A CTGTGATCTAAGA A AGCCTGAAAATAT CCTTCTTTGTAACCCT	AGGTATATACCAT CATGTACAGTTG[T /CJTGGCATGAGAA AGCAGATGAGCG TC	TGGCTCCGGCTA CACCAACATCATG [A/C]GGGTGCTAA GCATATCCTGAGA CGC
	2062	1744
cg43969763 2339	cg42879455	cg42659872
65	99	29

7 (7q21.3)	17	11 (20p13)
1.60E-220	3.80E-219	2.00E-215
Human Gene SWISSPROT- ID:Q16654 [PYRUVATE DEHYDROGENASE(LIPOAMIDE)] KINASE ISOZYME 4 PRECURSOR (EC 2.7 1.99) (PYRUVATE DEHYDROGENASE KINASE ISOFORM 4) - HOMO SAPIENS (HUMAN), 411 aa.lpcls:SPTREMBL- ID:Q16654 PYRUVATE DEHYDROGENASE KINASE ISOFORM 4 - HOMO SAPIENS (HUMAN), 411 aa.	Human Gene SWISSPROT- ID:Q15119 [PYRUVATE DEHYDROGENASE(LIPOAMIDE)] KINASE ISOZYME 2 PRECURSOR (EC 2.7.1.99) (PYRUVATE DEHYDROGENASE KINASE ISOFORM 2) - HOMO SAPIENS (HUMAN), 407 aa. pcls:SPTREMBL- ID:Q15119 PYRUVATE DEHYDROGENASE KINASE - HOMO SAPIENS (HUMAN), 407 aa.	Human Gene SWISSPROT- ID:P19138 CASEIN KINASE II, ALPHA CHAIN (CK II) (EC 2.7.1.37) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 391 aa.
kinase	kinase	kinase
SILENT- CODING	SILENT- CODING	SILENT- CODING
Ala	Arg	Thr
Ala	Arg	Thr Thr
U	<b>L</b>	<b>⊢</b>
∢	O	ပ
GCTTGCCAATTTC  A TCGTCTGTATGC  A/CJAAGTACTTTC AAGGAGATCTGAA TC	CTGTGGAGTACAT GTAGCTGAAGAGI C/TJCGCTCAATCT TCCTCAAGGGAAC AC	ACATCATATTGGC GCTGCTGACGGG[ C/T]GTACTGCCCC CTGGCATGCTAGA TG
	929	1448
cg42506800 1323		cg43917871
89	69	0.2

11 (20p13)	16		5
2.00E-215	7.80E-173	2.10E-154	7.90E-283
Human Gene SWISSPROT- ID:P19138 CASEIN KINASE II, ALPHA CHAIN (CK II) (EC 2.7.1.37) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 391 aa.	Human Gene SPTREMBL- ID:Q15599 TYROSINE KINASE ACTIVATOR PROTEIN 1 (TKA-1) - HOMO SAPIENS (HUMAN), 450 aa.	Human Gene SPTREMBL- ID:Q27467 SIMILARITY TO TYROSINE-PROTEIN KINASE - CAENORHABDITIS ELEGANS, 1280 aa.	kinaserecep Human Gene SWISSPROT- ID:Q04771 ACTIVIN RECEPTOR TYPE I PRECURSOR (EC 2.7.1) (ACTR-I) (SERINE/THREONINE- PROTEIN KINASE RECEPTOR R1) (SKR1) (ACTIVIN RECEPTOR-LIKE KINASE 2) (ALK-2) (TGF-B SUPERFAMILY RECEPTOR TYPE I) (TSR-I) - HOMO SAPIENS (HUMAN), 509 aa.
kinase	kinase	kinase	kinaserecep tor
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ala	Ser	Asn	Ala
Ala	Ser	Asn	Ala
<u></u> 9	⋖	U	ပ
<b>—</b>	ပ	<b>-</b>	<b>—</b>
CAGTGTAGAAATA GGGGTGCTCCATI T/GJGCCTCTCTTG CAGTAAGCCGTG ACT	AGCTCAATGGTG GCTCTGCGTGCT C[G/A]TCCCGAAG TGACCTGCCTGGT TCCG	AATTCAACCCACT CATCTATGGCAA[T /C]GATGTGGATTC TGTGGATGTTGCA A	AGACCCGCCGT CCCCTGGCCAAG C[T/C]GTGGAGTG CTGCCAAGGGGA CTGGT
1526	912	1765	610
cg43917871   1526	cg44131752	cg43969473	cg44025829
71	72	73	47

ဖ	6 (6p21.3)	(e:	6 (6p21.3)	6 (6p21.3)
1.20E-247	9.10E-147	3.70E-134	3.70E-134	3.70E-134 6
Human Gene SPTREMBL- ID:Q02646 MHC BINDING PROTEIN 2 - HOMO SAPIENS (HUMAN), 2500 aa.	Human Gene Homologous to SWISSPROT-ID:P28068 CLASS II HISTOCOMPATIBILITY ANTIGEN, M BETA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 263 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.
WHC	MHC	МНС	МНС	MHC
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Pro	Leu	ren	Leu	Leu
Pro	nen	ren	ren	
4	⋖	<u>o</u>	∢	∢
<u>ග</u>	ပ	A	9	<b>ඉ</b>
CTCACGCTTTGCA G GTCATCTGGTCC[ G/A]CCTAGCACTC CCTCCTCCTCG GC	TTAACACGAGGGA GCCTGTGATGCT[ G/A]GCCTGCTATG TGTGGGGCTTCTA TC	CCCCTGTGATCAA TATCACCTGGCT[ A/G]CGCAACGGC CAAACTGTCACTG AGG	CACCACCAGATG CCATGGAGACCC TIG/A]GTCTGTGC CCTGGGCCTGGC CATCG	CCATGGAGACCC TGGTCTGTGCCCT [G/A]GGCCTGGCC ATCGGCCTGGTG GGCT
1107	632	644	857	869
cg43318277 1107	cg43966144		cg42686658	cg42686658
75	92	77	78	79

6 (6p21.3)	6 (6p21.3)	6 (6p21.3)	9	19
3.70E-134 6	3.70E-134	3.70E-134 6	1.80E-113	1.80E-113
Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.
WHC	МНС	МНС	MHC	MHC
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
<u>a</u>	o O	Gly	Pro	Glu
<u>e</u>	Gly	Gly	Pro	ng
<b>-</b>	o	<b>-</b>	<b>-</b>	⋖
O	U	U	⋖	ပ
TGGTCTGTGCCCT GGGCCTGGCCAT C/TJGGCCTGGTG GGCTTCCTCGTG GGCA	TGGCCTGGCCA TCGGCCTGGTGG G[C/G]TTCCTCGT GGGCACCGTCCT CATCA	TCGGCCTGGTGG GCTTCCTCGTGG G[C/T]ACCGTCCT CATCATCATGGGC ACAT	GTTTCCTCATTAG CCCTGTGACCCC[ A/TJGCACACGCAG GGACCTACAGAT GTC	TTGACATCTACCA TCTATCCAGGGA[ G/A]GGGGAAGCC CATGAACTTAGGC TCC
188	893	905	279	492
cg42686658	cg42686658		cg38337333	cg38337333
80	81	85	83	84

19	19		20	3 (3p24)
1.80E-113   19	1.80E-113	1.80E-113	0	0
Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	misc_chann Human Gene SPTREMBL- ID:Q14193 H-DRK1 K(+) CHANNEL - HOMO SAPIENS (HUMAN), 858 aa.	misc_chann Human Gene SPTREMBL-ID:Q14524 SODIUM CHANNEL ALPHA SUBUNIT - HOMO SAPIENS (HUMAN), 2016 aa.
MHC	MHC	MHC	misc_chann el	misc_chann el
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
<u>F</u>	Phe	Leu	Thr	Cys
五	Phe	Leu	다. 나	Cys
⋖	<b>—</b>	ပ	<b>—</b>	F
<b>⊢</b>	U	F	O	O
CTTCTAGTAGTTG GCCTTCACCCAC[ T/A]GAACCAAGCT TCAAAACTGGTAT CG	GGTACTCAGTGG CCATCATCCTT[ C/TJACCATCCTTC CCTTCTTTCTCCT TC	TGGCCATCATCCT CTTCACCATCCT[T /CJCCCTTCTTTCT CCTTCATCGCTGG	AGGAGCTCAAGC GTGAGGCCGAGA C[C/T]CTACGGGA GCGGGAAGGCGA GGAGT	TCATGGGCAACCT AAGGCACAAGTG C/TJGTGCGCAACT TCACAGCGCTCAA CG
669	774	783	649	066
cg38337333 699	cg38337333	cg38337333	cg43984759	cg39660131
85	98	87	88	68

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19 (19q13.1 )			8 (8p11.2)
2.20E-113 19 (19 )	7.90E-79	7.90E-79	6.10E-70
misc_chann Human Gene Homologous to SWISSPROT-ID:Q07699 SODIUM CHANNEL BETA-1 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 218 aa ipcis:TREMBLNEW-ID:G2804300 VOLTAGE-GATED SODIUM CHANNEL BETA-1 SUBUNIT - HOMO SAPIENS (HUMAN), 218 aa.	misc_chann Human Gene Similar to SPTREMBL- 7.90E-79 el ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	misc_chann Human Gene Similar to SPTREMBL- 7.90E-79 el	misc_chann Human Gene Similar to SPTREMBL- 6.10E-70 ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.
misc_chann el	misc_chann el	misc_chann el	misc_chann el
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
กอ	Asp	Cys	Pro
Oin	Asp	Cys	Pro
ပ	<b>⊢</b>	<b>}</b>	ပ
<b>4</b>	ပ	ပ	∢
CGGAATACCTGG CCATCACCTCTGA [A/G]AGCAAAGAG AACTGCACGGGC GTCC	AGAGTGGCGAGT GGGTCATCGTGG A[C/T]GCCGTGGG CACCTACAACACC AGGA	ACAACACCAGGAA C GTACGAGTGCTG[ C/T]GCCGAGATCT ACCCGGACATCA CCT	AGAGGCTCTTTCT GCAGAAACTTCC[ A/CJAAATTACTTT GCATGAAAGATCA TG
	870	606	1160
cg44963814 717	cg21413267	cg21413267	cg3000465
06	91	92	. 86

94	96	96	26
cg30421838 3766	cg30421838	cg43947341	cg43939230
,	4114	713	4226
	ATAACTTGCATGA TCTTGTCAAACA[A /G]CTTCATCTGTA CTGCTTGAATACA T	TTACGTCGCCAAA  A TTCCCAGGGCAC[ A/G]TTGCGCACGA ACTTCAGTACGGG	TCCCTGTGACCCA GGCAGGTGCATG AGIGTGACACTGG TCGTGACCTGGC CAG
U			∢
<u></u>	<b>9</b>	9	<u>ග</u>
His S	Gin	Asn	Thr
His	Gin	Asn	Thr
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
nucl_recpt	nucl_recpt	nuclease	oncogene
Human Gene SWISSNEW- ID:P06401 PROGESTERONE RECEPTOR (PR) - HOMO SAPIENS (HUMAN), 933 aa. pcls:SWISSPROT-ID:P06401 PROGESTERONE RECEPTOR (PR) - HOMO SAPIENS (HUMAN), 933 aa.	Human Gene SWISSNEW- 1D:P06401 PROGESTERONE RECEPTOR (PR) - HOMO SAPIENS (HUMAN), 933 aa. pcls:SWISSPROT-ID:P06401 PROGESTERONE RECEPTOR (PR) - HOMO SAPIENS (HUMAN), 933 aa.	Human Gene Homologous to SWISSPROT-ID:P07992 DNA EXCISION REPAIR PROTEIN ERCC-1 - HOMO SAPIENS (HUMAN), 297 aa.	Human Gene SPTREMBL- 0 ID:Q99907 LATENT TRANSFORMING GROWTH FACTOR-BETA-BINDING PROTEIN- 2 - HOMO SAPIENS (HUMAN), 1821 aa.
		1.10E-115	
11 (11q22)	11 (11q22)		14 (14q24)

10	22 (22q11)	(52)	
3.70E-182 10	2.40E-84	2.80E-287	2.40E-155
Human Gene SWISSPROT- ID:P31314 HOMEOBOX PROTEIN HOX-11 (TCL-3 PROTO- ONCOGENE) - HOMO SAPIENS (HUMAN), 330 aa.	Human Gene Similar to SWISSPROT-ID 064010 PROTO- ONCOGENE C-CRK (P38) (ADAPTER MOLECULE CRK) - MUS MUSCULUS (MOUSE), 304 aa.	Human Gene SWISSPROT- ID:P19878 NEUTROPHIL CYTOSOL FACTOR 2 (NCF-2) (NEUTROPHIL NADPH OXIDASE FACTOR 2) (P67- PHOX) - HOMO SAPIENS (HUMAN), 526 aa.	phosphoryla Human Gene SWISSPROT- se ID:P00491 PURINE NUCLEOSIDE PHOSPHORYLASE (EC 2.4.2.1) (INOSINE PHOSPHORYLASE) (PNP) - HOMO SAPIENS (HUMAN), 289 aa.
oncogene	oncogene	oxidase	phosphoryla se
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ala	<u>e</u>	Leu	Pro
Ala	<u>=</u>	Leu	Pro
<u> </u>	<b>-</b>	F	⋖
ပ	O	ပ	<b>ඉ</b>
CGGCACACAGGC C CGCTCGCCGGAG C[C/T]GTGGCCCA CCCCCAGCCCCT	AGAACTCGCGGG TCTCCCACTACAT[ C/T]ATCAACTCGC TGCCCAACCGCC GTT	CTGCAACTACCTT GAACCAGTTGAG CTJTGCGGATCCA CCCTCAGCAGCA GCC	CAGCATGACCTG GCACTGTACTTCG [G/A]GGAAAGTTG GGGATTTCACCGT AGT
1447	742	963	1310
cg42674136 1447	cg41972699	cg42849556	cg43996195
86	6 6	100	101

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	ις.
2.40E-155	,
phosphoryla Human Gene SWISSPROT- se ID:P00491 PURINE NUCLEOSIDE PHOSPHORYLASE (EC 2.4.2.1) (INOSINE PHOSPHORYLASE) (PNP) - HOMO SAPIENS (HUMAN), 289 aa.	Human Gene Similar to SWISSNEW- 5.40E-62 ID:P53999 ACTIVATED RNA POLYMERASE II TRANSCRIPTIONAL COACTIVATOR P15 (PC4) (P14) - HOMO SAPIENS (HUMAN), 126 aa.pcls:SWISSPROT-ID:P53999 ACTIVATED RNA POLYMERASE II TRANSCRIPTIONAL COACTIVATOR P15 (PC4) (P14) - HOMO SAPIENS (HUMAN), 126 aa.
phosphoryla se	polymerase
SILENT- CODING	SILENT- CODING
Si T	<u>=</u>
His s	<u>=</u>
∢	<b>—</b>
ڻ -	∢
TTGCAACTTGAGG G TCGGTGCTTAGT[ G/AJTGAGACAGAA GCCATTCTGCAGT GT	TTTACAGTTTTCTT A ACTGCATCATC[A TJATGTCAGAAATC TGTTCCTTCAGCT
1421	372
cg43996195   1421	cg43948227 372
102	103

_	_	_	_	_		_					_		_				_		
4.40E-241																			
П	ID:P48050 INWARD RECTIFIER	POTASSIUM CHANNEL 4	(POTASSIUM CHANNEL,	INWARDLY RECTIFYING,	SUBFAMILY J, MEMBER 4)	(HIPPOCAMPAL INWARD	RECTIFIER) (HIR) (HRK1) (HIRK2)	(KIR2.3) - HOMO SAPIENS	(HUMAN), 445	aa.lpcls:SWISSPROT-ID:P48050	INWARD RECTIFIER POTASSIUM	CHANNEL 4 (POTASSIUM	CHANNEL, INWARDLY	RECTIFYING, SUBFAMILY J,	MEMBER 4) (HIPPOCAMPAL	INWARD RECTIFIER) (HIR) (HRK1)	(HIRK2) (KIR2.3) - HOMO SAPIENS	(HUMAN), 445 aa.	
potassium	channel																		
SILENT-	CODING																		
Ser																			
Ser																			
9				-															
A																			
AGAGCCACTACAA	GGTGGACTACTC	AGICGTTTTCACA	AGACCTACGAGG	TGG															
1302																			_
cg43333426 1302																			
104																			

95	7	14 (14q32.1 )
1.60E-227   16	1.20E-208	4.40E-83
Human Gene SWISSPROT- ID:P48051 G PROTEIN-ACTIVATED INWARD RECTIFIER POTASSIUM CHANNEL, INWARDLY RECTIFYING, SUBFAMILY J, MEMBER 6) (KATP-2) (BIR1) (KIR3.2) - HOMO SAPIENS (HUMAN), 423 aa.jpcls:TREMBLNEW-ID:G1518526 INWARDLY RECTIFYING POTASSIUM CHANNEL KIR3.2 - HOMO SAPIENS (HUMAN), 423 aa.	proteaseinhi Human Gene SWISSPROT- b ID:P07093 GLIA DERIVED NEXIN PRECURSOR (GDN) (PROTEASE NEXIN I) (PN-1) (PROTEASE INHIBITOR 7) - HOMO SAPIENS (HUMAN), 398 aa.	proteaseinhi Human Gene Similar to SWISSPROT-ID:P17475 ALPHA-1- ANTIPROTEINASE PRECURSOR (ALPHA-1-ANTITRYPSIN) (ALPHA- 1- PROTEINASE INHIBITOR) - RATTUS NORVEGICUS (RAT), 411
channel	proteaseinhi b	proteaseinhi b
SILENT. CODING	SILENT- CODING	SILENT
Asp	<al><li><al></al></li></al>	Thr
Asp	  - 	Thr
O	Ø	<del> </del>
<b>F</b>	ပ	O
TCACACCTGTCCT GACCCTGGAGGA[ T/C]GGGTTCTACG AAGTTGACTACAA CA	GCAGGATCACCT GCACCCTCTTGG G[C/G]ACCATGAT GCTCATCCAGCTG TCTA	AGTCAGACACCA GCTTAGAAATGAC [C/T]ATGGGCAAT GCCTTGTTTCTTG ATG
	1081	624
cg43051431 1683	cg43920929	cg43059041
105	106	107

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3 (3p)	- (		20 (20q12)	<sub>∞</sub>
2.90E-260 3 (3p)	1.40E-180	2.40E-114	1.50E-80	8.30E-58
Human Gene SPTREMBL- ID:Q92777 SYNAPSIN IIB - HOMO SAPIENS (HUMAN), 478 aa.	Human Gene SPTREMBL- ID:Q28686 50-KDA DYSTROPHIN- ASSOCIATED GLYCOPROTEIN PRECURSOR - ORYCTOLAGUS CUNICULUS (RABBIT), 387 aa.	Human Gene Homologous to TREMBLNEW-ID:G1703715 PANTOPHYSIN=SYNAPTOPHYSIN HOMOLOG - MUS SP, 261 aa.	Human Gene Similar to SWISSPROT-ID:P02585 TROPONIN C, SKELETAL MUSCLE - HOMO SAPIENS (HUMAN), 159 aa.	Human Gene Similar to SWISSPROT-ID:P02535 KERATIN, TYPE I CYTOSKELETAL 10 (CYTOKERATIN 10) (56 KD CYTOKERATIN) (KERATIN, TYPE I CYTOSKELETAL 59 KD) - MUS MUSCULUS (MOUSE), 569 aa.
struct	struct	struct	struct	struct
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Leu	ng O	ren	Thr	Arg
Leu	<u> </u>	Leu	Ĕ E	Arg
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O	O	⋖	ပ	ပ
GGAGGACAGGCA ACTCATCACCGAA [C/I]TAGTCATCAG CAAGATGAACCAG CT	ACCCGTTCTTCTG CCCACCCACTGA[ G/A]GCCCCAGAC CGTGACTTCTTGG TGG	TCTGGAAGCCGG ACATCCTCTGAGC [A/G]AGTCGACTG ATCCGCTGGCGA	TCATCAGAGATTC GATCTCCTCGTCI C/AJGTCACGTGCT CCCCGGAGGCCC TGA	GCTTTGAGGAGG AGGCGCGGTTGC G[C/G]GACGACAC TGAGGCGGCCAT CCGCG
1385	1002	2160	497	788
cg40148056 1385	cg42894986	cg43961212	cg42898003	cg43960684
108	109	110	<del></del>	112
	<del></del>		<u> </u>	

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Human Gene Similar to SPTREMBL- 9.20E-83 ID:Q42761 SQUALENE SYNTHASE (EC 2.5.1.21) (FARNESYL- DIPHOSPHATE FARNESYLTRANSFERASE) (FARNESYLTRANSFERASE) (PRESQUALENE-DI- DIPHOSPHOSPHATE SYNTHASE) - GLYCYRRHIZA GLABRA, 412 aa.	Human Gene Similar to SWISSNEW- 7.70E-79 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.jpcls:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.
synthase	synthase .
SILENT- CODING	SILENT-
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<u>စ</u>	∢
TTCGGAAAGGGC G AAGCAGTGACCCT [G/CJATGATGGAT GCCACCAATATGC CAG	ACACCCACAGCA GTTTGGTTTAGG ATJTTATCTGTAAA TGGAAGGTTCTG GC
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cg43958714 1049	cg43124627 901
113	4

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9.90E-70	-											j				
Human Gene Similar to SWISSNEW-   9.90E-70	ID:P53556 8-AMINO-7-	OXONONANOATE SYNTHASE (EC	2.3.1.47) (7-KETO-8-AMINO-	PELARGONIC ACID SYNTHETASE)	(7-KAP SYNTHETASE) (L-ALANINE-	-PIMELYL COA LIGASE) -	BACILLUS SUBTILIS, 389	aa.pcls:SWISSPROT-ID:P535568-	AMINO-7-OXONONANOATE	SYNTHASE (EC 2.3.1.47) (7-KETO-	8-AMINO- PELARGONIC ACID	SYNTHETASE) (7-KAP	SYNTHETASE) (L-ALANINE	PIMELYL COA LIGASE) - BACILLUS	SUBTILIS, 389 aa.	
SILENT- synthase	•							_								
SILENT-	CODING															
Ala																_
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TCTTCTCCAACAG A	TCTGCCACCCGC	ATJGTCGTTGGCT	GCGCCTCCAAGG	၁၁၁						-						
cg43968419   906	1															
115																

7.40E-65	7.40E-65
Human Gene Similar to SWISSNEW- 7.40E-65 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa. pcls:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.	Human Gene Similar to SWISSNEW- ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL- ACTIVATING ENZYME) (ACETYL- COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.lpcis:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL- ACTIVATING ENZYME) (ACETYL- COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.
synthase	synthase
SILENT- CODING	SILENT- CODING
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∢	<b>A</b>
ပ	<b>o</b>
TTGTGGTCCTGGC G CTCGCAGTTCCT[ GAJTCCCATGACC CAGAACAGCTCAC CA	TCACAGGGAAAAT TCAACGAGCCAA[ G/A]CTTCGAGGACA AGGAGTGGAAGA TGT
1	1622
cg43064068 1484	cg43064068
116	117

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1.70E-241   11	1.70E-241	1.70E-241	1.60E-236	1.60E-236
Human Gene SWISSPROT- ID:P14416 D(2) DOPAMINE RECEPTOR - HOMO SAPIENS (HUMAN), 443 aa.	Human Gene SWISSPROT- ID: P14416 D(2) DOPAMINE RECEPTOR - HOMO SAPIENS (HUMAN), 443 aa.	Human Gene SWISSPROT- ID:P14416 D(2) DOPAMINE RECEPTOR - HOMO SAPIENS (HUMAN), 443 aa.	Human Gene SWISSPROT- ID:P25101 ENDOTHELIN-1 RECEPTOR PRECURSOR (ET-A) - HOMO SAPIENS (HUMAN), 427 aa.	Human Gene SWISSPROT- ID:P25101 ENDOTHELIN-1 RECEPTOR PRECURSOR (ET-A) - HOMO SAPIENS (HUMAN), 427 aa.
tm7	tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
ž Š	Leu	Pro	His Siz	Glu
<u>x</u>	Leu	P.O.	Ξ S S	ng Oln
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TGACTCTCCCCGA C CCCGTCCCACCA[ C/TJGGTCTCCACA GCACTCCCGACA GCC	TCCGCAAGGCCTT CCTGAAGATCCT C/TJCACTGCTGAC TCTGCTGCCTGCC	TCCTCGTCGCCAC C ACTGGTCATGCC[ C/A]TGGGTTGTCT ACCTGGAGGTGG TAG	TTGCTCTTTGCTG C GTTCCCTCTTCA[C //JITAAGCCGTAT ATTGAAGAAACT G	TATTGAAGAAAAC TGTGTATAACGAIA /GJATGGACAAGAA CCGATGTGAATTA C
1278	1662	909	1471	1507
cg41084924 1278	cg41084924	cg41084924	cg43985000	cg43985000
118	119	120	121	122

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3.00E-212 X
Human Gene SWISSNEW- ID:P32247 BOMBESIN RECEPTOR SUBTYPE-3 (BRS-3) - HOMO SAPIENS (HUMAN), 399 aa.lpcls:SWISSPROT-ID:P32247 BOMBESIN RECEPTOR SUBTYPE- 3 (BRS-3) - HOMO SAPIENS (HUMAN), 399 aa.lpcls:TREMBLNEW-ID:E1240254 BOMBESIN RECEPTOR SUBTYPE- 3 (UTERINE BOMBESIN RECEPTOR, BRS-3) - HOMO SAPIENS (HUMAN), 399 aa.
tm7
SILENT- CODING
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ATTCCTTGATTGC TAGGACCCTTTA[ C/TJAAAAGCACCC TGAACATACCTAC TG
1263
cg3003519
124

×	12 (14q32.1 )	19 (19q13.3 )	19 (19q13.3 )
3.00E-212 X	9.00E-211	8.30E-208	8.30E-208
Human Gene SWISSNEW- ID:P32247 BOMBESIN RECEPTOR SUBTYPE-3 (BRS-3) - HOMO SAPIENS (HUMAN), 399 aa.lpcis:SWISSPROT-ID:P32247 BOMBESIN RECEPTOR SUBTYPE- 3 (BRS-3) - HOMO SAPIENS (HUMAN), 399 aa.lpcis:TREMBLNEW-ID:E1240254 BOMBESIN RECEPTOR SUBTYPE- 3 (UTERINE BOMBESIN RECEPTOR, BRS-3) - HOMO SAPIENS (HUMAN), 399 aa.	Human Gene SWISSPROT- ID:P30411 B2 BRADYKININ RECEPTOR (BK-2 RECEPTOR) - HOMO SAPIENS (HUMAN), 391 aa.	Human Gene SWISSPROT- ID:P43119 PROSTACYCLIN RECEPTOR (PROSTANOID IP RECEPTOR) (PGI RECEPTOR) - HOMO SAPIENS (HUMAN), 386 aa.	Human Gene SWISSPROT- ID:P43119 PROSTACYCLIN RECEPTOR (PROSTANOID IP RECEPTOR) (PGI RECEPTOR) - HOMO SAPIENS (HUMAN), 386 aa.
tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ġ Ō	Tyr	Ser	\sqr
Gly	Tyr	Ser	Val
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O	ပ	O	ပ
CTTATGCTGTGAT CATTTCAGTGGG C/JATCCTTGGAA ATGCTATTCTCAT CA	TCCGAAAGAGTC TTGGGAGGTGTA C/TJCAGGGAGTGT GCCAGAAAGGGG GCT	AGACACCCTTTC CCAGCTCGCCTC[ C/A]GGGAGGAGG GACCCAAGGGCC	GCCCTCGGCCT TCGCGGTGCTGG T[C/G]ACCGGACT GGCGGCCACCGA
711	1182	1097	272
cg3003519	cg43969010	cg43263108	cg43263108
125	126	127	128

8 (8q11.2)	8 (8q11.2)	(2)		1 1p36.1)
2.10E-204   8   (8	2.10E-204 8 (8	2.10E-204	1.40E-196	2.10E-195 1
Human Gene SWISSPROT- ID:P41145 KAPPA-TYPE OPIOID RECEPTOR (KOR-1) - HOMO SAPIENS (HUMAN), 380 aa.	Human Gene SWISSPROT- ID:P41145 KAPPA-TYPE OPIOID RECEPTOR (KOR-1) - HOMO SAPIENS (HUMAN), 380 aa.	Human Gene SWISSPROT- ID:P41145 KAPPA-TYPE OPIOID RECEPTOR (KOR-1) - HOMO SAPIENS (HUMAN), 380 aa.	Human Gene TREMBLNEW- ID:G2736282 G PROTEIN COUPLED RECEPTOR - HOMO SAPIENS (HUMAN), 362 aa.	Human Gene SWISSPROT- ID:P41143 DELTA-TYPE OPIOID RECEPTOR (DOR-1) - HOMO SAPIENS (HUMAN), 372 aa.
tm7	tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Ala	<u>=</u>	Pro	Ser	Gly
Ala	<u>e</u>	Pro	Ser	Gly
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<b>4</b>	U	<u>o</u>	⋖	ပ
CCAGACTGGTCCT A GGTGGTGGTGGC[ A/G]GTCTTCGTCG TCTGCTGGACTCC CA	CAGCACTCACCAT GGAATCCCCGAT[ C/TJCAGATCTTCC GCGGGGAGCCGG GCC	CGATCCAGATCTT CCGCGGGGGAGCC [G/T]GGCCCTACC TGCGCCCCGAGC	TGGATCTGCACCT A CTTCGACTACIA ICIGAGCCAGGGA ACTTCTCGGACAT CA	CGCTGCACCTGT GCATCGCGCTGG G[C/T]TACGCCAAT AGCAGCCTCAAC CCCG
1220	392	413	155	1154
cg43267238 1220	cg43267238	cg43267238	cg43264978	cg3001696
129	130	131	132	133

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1 (1p36.1)	1 (1p31.2)		1	
2.10E-195	3.10E-194	1.10E-173	2.50E-160	2.50E-160
Human Gene SWISSPROT- ID:P41143 DELTA-TYPE OPIOID RECEPTOR (DOR-1) - HOMO SAPIENS (HUMAN), 372 aa.	Human Gene SWISSPROT- ID:P43115 PROSTAGLANDIN E2 RECEPTOR, EP3 SUBTYPE (PROSTANOID EP3 RECEPTOR) (PGE RECEPTOR, EP3 SUBTYPE)- HOMO SAPIENS (HUMAN), 390 aa.	Human Gene SWISSPROT- ID:P30542 ADENOSINE A1 RECEPTOR - HOMO SAPIENS (HUMAN), 326 aa.	Human Gene TREMBLNEW- ID:E1246031 OLFACTORY RECEPTOR - HOMO SAPIENS (HUMAN), 312 aa.	Human Gene TREMBLNEW- ID:E1246031 OLFACTORY RECEPTOR - HOMO SAPIENS (HUMAN), 312 aa.
tm7	tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Gly	Leu	Val	Thr	Gly
Gly	Leu	\ \ \ \	Thr	Ġļ
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TGGCTGTGACCC GTCCCCGGGACG G(G/T)GCAGTGGT GTCCATGCTCCA	TGGCCTTCCCGAT C CACCATGCTGCT[ C/GJACTGGTTTCG TGGCAACGCAC TGGCAACGCAC	GGGATGCCACCT TCTGCTTCATCGT[ C/GJTCGCTGGCG GTGGCTGATGTG GCCG	CCATCTCCTTCTG TGGCTGTCTCAC[ A/G]CAGATGTATT TCGTTTTCATGTT CG	GGTGGAAAGCCT TCTCCACCTGTGG [I/C]TCTCACCTGG CTGTGGTTCTCCT CT
815	407	347	358	787
cg3001696	cg42704646	cg43326635	cg3003708	cg3003708
134	135	136	137	138

	4			
2.50E-160	1.90E-153	2.10E-67	2.10E-67	2.10E-67
Human Gene TREMBLNEW- ID:E1246031 OLFACTORY RECEPTOR - HOMO SAPIENS (HUMAN), 312 aa.	Human Gene SWISSPROT- ID:Q15062 OLFACTORY RECEPTOR-LIKE PROTEIN FAT11 - HOMO SAPIENS (HUMAN), 316 aa.	Human Gene Similar to SWISSPROT-ID:P30975 TACHYKININ-LIKE PEPTIDES RECEPTOR 99D (DTKR) - DROSOPHILA MELANOGASTER (FRUIT FLY), 519 aa.	Human Gene Similar to SWISSPROT-ID:P30975 TACHYKININ-LIKE PEPTIDES RECEPTOR 99D (DTKR) - DROSOPHILA MELANOGASTER (FRUIT FLY), 519 aa.	Human Gene Similar to SWISSPROT-ID:P30975 TACHYKININ-LIKE PEPTIDES RECEPTOR 99D (DTKR) - DROSOPHILA MELANOGASTER (FRUIT FLY), 519 aa.
tm7	tm7	tm7	tm7	tm7
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Phe	Ser	Leu	His Si	O <u>n</u>
Phe	Ser	ren	i E	<u>o</u> l
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ACAGCACCATCAT TGCTGTGTATTT[T /cjAACCCTCTGTC CTCCCACTCAGCT	ACTCTCCAATGTA CTTTTCCTCTCC //JAACCTCTCCTT CTTGGACCTCTGC	GACATCAGGCGC ACGGTGCCAACC T[C/G]CGCCATCT GCAGGCCAAGAA GAAGT	AGGCGCACGGTG CCAACCTCCGCC A[T/C]CTGCAGGC CAAGAAGAAGTTT GTGA	CAGCCTTCTCCAT GCCCAGCTGGCA[ GA]CTGGCACTGT GGGCACCAGCT ACC
841	537	717	723	96
cg3003708	cg36729339	cg38841806	cg38841806	cg38841806
139	140	141	142	143

5 (5q32)	5 (5q32)	(2)	15
2.00E-58	2.00E-58	2.20E-207	9.00E-179
Human Gene Similar to SWISSPROT-ID:Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	Human Gene Similar to SWISSPROT-ID:Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	Human Gene SWISSPROT- ID:P26022 PENTAXIN-RELATED PROTEIN PTX3 PRECURSOR (TUMOR NECROSIS FACTOR- INDUCIBLE PROTEIN TSG-14) - HOMO SAPIENS (HUMAN), 381 aa.	transcriptfac Human Gene SWISSPROT- ID:Q06545 GA BINDING PROTEIN BETA-2 CHAIN (GABP-BETA-2 SUBUNIT) (TRANSCRIPTION FACTOR E4TF1-47) (GAPBP2) - HOMO SAPIENS (HUMAN), 347 aa.
tm7	tm7	Į <b>r</b> į	transcriptfac tor
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Leu	Arg	P 0	Lys
Leu	Arg	Pro	Lys
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ව	O	<b>4</b>	⋖
cctgtgctgatct getcated getcatgesctl getcatgesctl gealgecagescc ccctttgggggggggggggggggggggggggggggg	CTTGCCCATTCAG C ATGCACTGGTAC[ C/A]GGGCCACCC ACCAGGAAGCCA	TTGGAAGCGTGC ATCCAGTGAGACC [ATJATGAGGCTTG AGTCTTTTAGTGC CT	GTGTGAGCAGAG ATGCCAGAACCAA [A/G]GTGGACCGA ACACCATTACATA TGG
1966	2237	289	376
cg43040273 1966	cg43040273 2237	cg43336100	cg21646034
144	145	146	147

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5.30E-245	6.50E-192
Human Gene SWISSPROT- ID:P39656 DOLICHYL- DIPHOSPHOOLIGOSACCHARIDE PROTEIN GLYCOSYLTRANSFERASE 48 KD SUBUNIT PRECURSOR (EC 2.4.1.119) (OLIGOSACCHARYL TRANSFERASE 48 KD SUBUNIT) (DDOST 48 KD SUBUNIT) (DDOST 48 KD SUBUNIT) (KIAA0115) (HA0643) - HOMO SAPIENS (HUMAN), 456 aa.	Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA-N- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B SAPIENS (HUMAN), 354 aa.
transferase	transferase
SILENT. CODING	SILENT-CODING
Gly	년 ·
Ġļ	Thr
ပ	ပ
∢	∢
TGGCAGCTACCA A GCACACTGCCTC C(A/G)CCGTCAAT AAAGGCACTGATG GTCT	TGGCTCCCATTGT CTGGGAGGGCAC[ A/G]TTCAACATCG ACATCCTCAACGA GC GC
	294
cg43916882 1608	cg2537639
148	149

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9 (9q34)										1						
6.50E-192   9 (9q34)												<del>- ;</del>			_	
transferase   Human Gene SWISSPROT-	ID:P16442	FUCOSYLGLYCOPROTEIN ALPHA-	Ż	ACETYLGALACTOSAMINYLTRANS	FERASE (EC 2.4.1.40) (HISTO-	BLOOD GROUP A TRANSFERASE)	(A TRANSFERASE) /	FUCOSYLGLYCOPROTEIN 3-	ALPHA-	GALACTOSYLTRANSFERASE (EC	2.4.1.37) (HISTO-BLOOD GROUP B	TRANSFERASE) (B	TRANSFERASE) (NAGAT) - HOMO	SAPIENS (HUMAN), 354 aa.		
transferase																
SILENT-	CODING															
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ACGTGGACATGG C	AGTTCCGCGACC	A[C/T]GTGGGCGT	GGAGATCCTGACT	၁၅၁၁												
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6.50E-192   9 (9q34)			_									Ţ				
transferase   Human Gene SWISSPROT.	ID:P16442	FUCOSYLGLYCOPROTEIN ALPHA-	ż	<b>ACETYLGALACTOSAMINYLTRANS</b>	FERASE (EC 2.4.1.40) (HISTO-	<b>BLOOD GROUP A TRANSFERASE)</b>	(A TRANSFERASE) /	FUCOSYLGLYCOPROTEIN 3-	ALPHA-	GALACTOSYLTRANSFERASE (EC	2.4.1.37) (HISTO-BLOOD GROUP B	TRANSFERASE) (B	TRANSFERASE) (NAGAT) - HOMO	SAPIENS (HUMAN), 354 aa.		
transferase																
SILENT-	CODING															
Pro													-			
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ACGTGGGCGTGG  G	AGATCCTGACTCC	[G/A]CTGTTCGGC	ACCCTGCACCCC	GGCT												
829																
cg2537639  678																
151																
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(9q34)	
6 26	
6.50E-192 9 (9q34)	
transferase Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B SAPIENS (HUMAN), 354 aa.	
transferase	
SILENT- CODING	
Pro	-
Pro	<del></del>
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O	
GGCCCCAGTCCC CAGGCCTACATCCC CCCTACAGGACGAGGGCGATTTCTACTACTACTACTACTACC	
768	
cg2537639	
152	

9 (9q34)	9
6.50E-192 9 (9q34)	1.60E-117 16
transferase Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (AGGAT) - HOMO SAPIENS (HUMAN), 354 aa.	Human Gene Homologous to SWISSPROT-ID:P30711 GLUTATHIONE S-TRANSFERASE THETA 1 (EC 2.5.1.18) (CLASS- THETA) - HOMO SAPIENS (HUMAN), 239 aa.
transferase	transferase
SILENT- CODING	SILENT- CODING
Leu	\alpha
Leu	
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ACGAGAGCCACC G TGAACAAGTACCT [G/A]CTGCGCCAC AAACCCACCAAG GTGC	GGGGAGATACTG GCTCACCCAGGA A[A/C]ACAGGGAA CATCACCTTATGC CACA
927	732
cg2537639	cg44000740 732
153	154

13	(5p15.3)	<del>-</del>	
. 0	0	1.60E-259	4.40E-241
Human Gene SWISSPROT- ID:P30825 HIGH-AFFINITY CATIONIC AMINO ACID TRANSPORTER-1 (CAT-1) (CAT1) (SYSTEM Y+ BASIC AMINO ACID TRANSPORTER) (ECOTROPIC RETROVIRAL LEUKEMIA RECEPTOR HOMOLOG) (ERR) (ECOTROPIC RETROVIRUS RECEPTOR HOMOLOG) - HOMO SAPIENS (HUMAN), 629 aa.	Human Gene SWISSPROT- ID:Q01959 SODIUM-DEPENDENT DOPAMINE TRANSPORTER (DA TRANSPORTER) (DAT) - HOMO SAPIENS (HUMAN), 620 aa.	Human Gene SWISSPROT- ID:P11166 GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN - HOMO SAPIENS (HUMAN), 492 aa.	Human Gene SPTREMBL- ID:Q14728 TETRACYCLINE TRANSPORTER-LIKE PROTEIN MRNA - HOMO SAPIENS (HUMAN), 455 aa.
transport	transport	transport	transport
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Cys	Ser	Asp	Pro
Cys	Ser	Asp	Pro
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ACGCAGTGGCCG C TGGGCTCCCTCT G[C/T]GCTCTTTCC GCCAGTCTTCTAG GTT	CCATCGCCACGC TCCCTCTGTCCTC [A/G]GCCTGGGCC GTGGTCTTCTCA TCA	GATGGAACAGCT CCTCGGGTGTCTT [G/A]TCACTTTGGC TGGCTCCCCCT GCC	GCGCTGCTGGT GGATGGGTGGGC G[C/G]GGGGTGCA GCCTCCACCCCC TCCCC
1185	1347	1719	1656
cg38869466 1185	cg40351913	cg43964039	cg43992017
155	156	157	158

	91	16	17	2 (2q34)
	0		0	0
Human Gene SWISSNEW- ACC:Q15031 PROBABLE LEUCYL- TRNA SYNTHETASE, MITOCHONDRIAL PRECURSOR (EC 6.1.1.4) (LEUCINE-TRNA LIGASE) (LEURS) (KIAA0028) - Homo sapiens (Human), 903 aa.	Human Gene SPTREMBL- ACC:Q16084 P130 - HOMO SAPIENS (HUMAN), 1139 aa.	Human Gene SPTREMBL- ACC:Q16084 P130 - HOMO SAPIENS (HUMAN), 1139 aa.	Human Gene SWISSPROT- ACC:P42694 HYPOTHETICAL PROTEIN KIAA0054 - Homo sapiens (Human), 1942 aa.	Human Gene REMTREMBL- ACC:E1296438 SEQUENCE 28 FROM PATENT WO9727323 - UNIDENTIFIED, 1829 aa.
UNCLASSI	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED :	UNCLASSI FIED
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Leu	Arg	Ala	<u>Š</u>	Ala
Leu	Arg	Ala	S S	Ala
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O	U	U	O	 
CGCCTGTAATGG CTGTGAACATGCT [C/TJACCCAGCAG GAGGTCCCTGTC GTTA	CATTGACTAGGG GCTGTGGGGGCA T[C/G]CGCCCAGG TGTCCTCCATCA GAGG	AGCAGGCCAAGA GAGATCTGTGGAA [C/T]GCATCTTGTT CCAGAATACCAGA TA	CGCTGGCATAGG ACATGGCGGGCT T[G/T]CCCCCGC AGAGCTCTGGGG	AAATAACAAGGCA TTGAAGAATGGCI TAJGACGAGCGG AAAGACGAAGGA AAGG
1238	2875	3385	517	254
cg43948629 1238	cg43955093	cg43955093	cg43055918	cg43974592
159	160	161	162	163

22 (22q13.1 )	3 (3q21)	7 (7p15)	
0	0	0	0
UNCLASSI Human Gene SWISSPROT- ACC:P13866 SODIUM/GLUCOSE COTRANSPORTER 1 (NA(+)/GLUCOSE COTRANSPORTER 1) (HIGH AFFINITY SODIUM-GLUCOSE COTRANSPORTER) - Homo sapiens (Human), 664 aa.	Human Gene SWISSNEW- ACC:P00450 CERULOPLASMIN PRECURSOR (EC 1.16.3.1) (FERROXIDASE) - Homo sapiens (Human), 1065 aa.	Human Gene SWISSPROT- ACC:P41250 GLYCYL-TRNA SYNTHETASE (EC 6.1.1.14) (GLYCINETRNA LIGASE) (GLYRS) - Homo sapiens (Human), 685 aa.	Human Gene SWISSPROT- ACC:P02771 ALPHA- FETOPROTEIN PRECURSOR (ALPHA-FETOGLOBULIN) (ALPHA- 1- FETOPROTEIN) - Homo sapiens (Human), 609 aa.
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Asp	Lys	Ala	Glu
Asp	Lys	Ala	Glu
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O	⋖	<b>⊢</b>	⋖
AAGGACGCAACG CTGCCACCATGG A[C/T]AGTAGCAC CTGGAGCCCCAA GACCA	TGAAAGTATTCAA TCCCAGAAGGAA[ A/G]CTGGAATTTG CCCTTCTGTTTCT AG	GCTGGCGCACTG CTAGCCTCAGAG G[T/A]GCCAGCAC CTCCTCAGCCCC CGCGC	AAAACCAGCTACC A TGCCTTTCTGGA[ A/G]GAACTTTGCC ATGAGAAGAAAT TT
206	2757	2472	481
cg43956384 206	cg44025634	cg43940037 2472	cg44024279
164	165	166	167

4	× (×q28)	r (1q42)		2 (2cen)
5.00E-289   14	1.80E-287 X (Xq28)	3.90E-257	6.90E-239	3.00E-227 2 (2cen)
Human Gene SWISSNEW- ACC: Q13573 NUCLEAR PROTEIN SKIP (SNW1 PROTEIN) (NUCLEAR RECEPTOR COACTIVATOR NCOA- 62) - Homo sapiens (Human), 536 aa.	Human Gene SWISSPROT- ACC:P51854 TRANSKETOLASE 2 (EC 2.2.1.1) (TK 2) (TRANSKETOLASE RELATED PROTEIN) - Homo sapiens (Human), 557 aa.	Human Gene SWISSPROT- ACC:P01019 ANGIOTENSINOGEN PRECURSOR - Homo sapiens (Human), 485 aa.	Human Gene SPTREMBL- ACC:043411 HYPOTHETICAL 49.3 KD PROTEIN - HOMO SAPIENS (HUMAN), 442 aa (fragment).	Human Gene SWISSPROT- ACC:P09529 INHIBIN BETA B CHAIN PRECURSOR (ACTIVIN BETA-B CHAIN) - Homo sapiens (Human), 407 aa.
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
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CATGAGITITGAT CCCAGCTCTTCTI C/TTCCCTGGCTT TCTGGGCCATTTC TC	TTGGAGCTGGAAT A TACTGTGTATGA[A /G]GCCTTAGCAGC TGCTGATGAGCTT TGCTGATGAGCTT	TCAACACCTACGT CCACTTCCAAGG G/TAAGATGAAGG GCTTCTCCCTGCT GG	TGGCTTGCACAAA A TTGCTTGAAGAC[ A/TJCGATCCATGT AAGTGGACTGTCT TG	CTGGGCAGCTGC CCTCACAGTAGTT [C/G]CCGTAGTAG CCGGTGGGTGCT ATGA
1122	1778	1242	770	2186
cg43926814 1122	cg40918088	cg43966985	cg43924009	cg42913861
168	169	170	171	172

2 (2cen)	12	2	11 (11p15.5 )
3.00E-227   2 (2cen)	2.40E-225	2.40E-225	2.10E-224   11   (1   )
UNCLASSI Human Gene SWISSPROT- FIED ACC:P09529 INHIBIN BETA B CHAIN PRECURSOR (ACTIVIN BETA-B CHAIN) - Homo sapiens (Human), 407 aa.	Human Gene SWISSPRÖT- ACC:P29080 (2'- 5')OLIGOADENYLATE SYNTHETASE 1B (EC 2.7.7) ((2- 5')OLIGO(A) SYNTHETASE 1B) (2- 5A SYNTHETASE 1B) - Mus musculus (Mouse), 414 aa.	Human Gene SWISSPROT- ACC:P29080 (2'- 5')OLIGOADENYLATE SYNTHETASE 1B (EC 2.7.7) ((2- 5')OLIGO(A) SYNTHETASE 1B) (2- 5A SYNTHETASE 1B) - Mus musculus (Mouse), 414 aa.	UNCLASSI Human Gene SWISSPROT- ACC:P04177 TYROSINE 3- MONOOXYGENASE (EC 1.14.16.2) (TYROSINE 3-HYDROXYLASE) (TH) - Rattus norvegicus (Rat), 498
UNCLASSI	UNCLASSI	UNCLASSI FIED	UNCLASSI
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
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GCCGAGCCTGCA CCACCACAAAGG G[C/T]CGGTGCGA CTCTTCGCCTGG	CATAGAAGGCCA GGAGTCAGGAGA C[C/T]TGGGTTCT GTCCTGGATTATA CACC	GGAGTCAGGAGA CCTGGGTTCTGTC [C/T]TGGATTATAC ACCAGCTCACTGA GG	CCATGCCCACCC CCGACGCCACCA C[G/C]CCACAGGC CAAGGGCTTCCG CAGGG
2354	256	268	53
cg42913861	cg43929685	cg43929685	cg43918561
173	174	175	176

8 (8p12)	=	(19q13)	19 (19q13)
3.90E-218 8 (8p12)	4.90E-211	1.30E-210	1.30E-210
Human Gene SWISSPROT- ACC:P14902 INDOLEAMINE 2,3- DIOXYGENASE (EC 1.13.11.42) (IDO) (INDOLEAMINE- PYRROLE 2,3-DIOXYGENASE) - Homo sapiens (Human), 403 aa.	Human Gene SPTREMBL- ACC:Q99816 TUMOR SUSCEPTIBILITY PROTEIN - HOMO SAPIENS (HUMAN), 390 aa.	Human Gene SWISSPROT- ACC:015382 BRANCHED-CHAIN AMINO ACID AMINOTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.6.1.42) (BCAT(M)) - Homo sapiens (Human), 392 aa.	Human Gene SWISSPROT- ACC:015382 BRANCHED-CHAIN AMINO ACID AMINOTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.6.1.42) (BCAT(M)) - Homo sapiens (Human), 392 aa.
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
SILENT- CODING	SILENT- CODING	SILENT. CODING	SILENT- CODING
Val	<u>e</u>	ren [Fen	E S
Vai	ell e	Leu	Ĭ.
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ATTTAATGAATTTC A CTGAAGACTGT[A/ GJAGAAGTACAAC TGAGAAATCCCTT T	AAAACAATGATAT CGATGAAGTTAT[ C/IJATTCCCACAG CTCCCTTATACAA AC	CACCATGAAGCA GTTGCTGCGGGC C[C/T]TGGAGGAG GGCCGCGTGCGG GAAGT	TCCTGTACAAAGA CAGGAACCTCCA[ C/TJATTCCCACCA TGGAAAATGGGC CTG
1885	1146	626	1074
cg42343176 1885	cg43956382	cg43984681	cg43984681
177	178	179	180

6.20E-204 1	1.90E-200 22	5.60E-191
UNCLASSI Human Gene SPTREMBL- ACC:P78545 ESE-1B - HOMO SAPIENS (HUMAN), 371 aa.	JNCLASSI Human Gene SPTREMBL- ACC:060704 TYROSYLPROTEIN SULFOTRANSFERASE-2 - HOMO SAPIENS (HUMAN), 377 aa.	UNCLASSI Human Gene SWISSNEW- FIED ACC:Q03385 GUANINE NUCLEOTIDE DISSOCIATION STIMULATOR RALGDS FORM A (RALGEF) - Mus musculus (Mouse),
	UNCLASSI FIED	UNCLASSI
SILENT- CODING	SILENT- CODING	SILENT- CODING
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CTGCGGTGGAGA A CGTCAGAGCTGC C[A/G]GGGGAGGG GGCTCCTGCGCC ACAGC	ACCAGCTGCTCGT G AGTACACAGGCA[ G/A]GCACTTCTCC TTGCCTACCTCCA TG	CTACCGCCAACTA C TGACTTTGTCCT[C /GJAAGAAGCGGA CCTTCACCAAGG GAG
1762	988	1114
cg43950996 1762	cg44024506	cg43980381
181	182	183

	15	9 (9q22.2)
2.00E-189	1.40E-188	3.50E-178
UNCLASSI Human Gene SWISSPROT- ACC:Q10981 GALACTOSIDE 2-L- FUCOSYLTRANSFERASE 2 (EC 2.4.1.69) (GDP-L-FUCOSE:BETA- D- GALACTOSIDE 2-ALPHA-L- FUCOSYLTRANSFERASE 2) (ALPHA(1,2)FT 2) (FUCOSYLTRANSFERASE 2) (SECRETOR BLOOD GROUP ALPHA-2- FUCOSYLTRANSFERASE) (SECRETOR BLOOD GROUP ALPHA-2- FUCOSYLTRANSFERASE) (SECRETOR FACTOR) (SE) (SE2) - Homo sapiens (Human), 343 aa.	Human Gene SWISSPROT- ACC:P09471 GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 1 - Homo sapiens (Human), 353 aa.	Human Gene SWISSPROT- ACC:P09467 FRUCTOSE-1,6- BISPHOSPHATASE (EC 3.1.3.11) (D-FRUCTOSE-1,6- BISPHOSPHATE 1- PHOSPHOHYDROLASE) (FBPASE) - Homo sapiens (Human), 337 aa.
UNCLASSI	UNCLASSI FIED	UNCLASSI FIED
SILENT.	SILENT- CODING	SILENT
Asn	Val	Ala
Asn	Val	Ala
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TCCCCTGGCAGA ACTACCACCTGAA [C/T]GACTGGATG GAGGAGGAATAC CGCC	ACATCCAGGTGGT GTTCGACGCCGT[ C/TJACCGACATCA TCATTGCCAACAA	CAGTGACGGCAG GGTCAAAGTCCTT [G/A]GCGTAGCCC TCGTTAAGGCTGT AGA
501	1497	615
i i	cg43249389	cg43946951
184	185	186

13.1	3.1			
16 (16p13.1 1)	8 (8p23.1)	22		
1.20E-161 16 (16 1)	5.40E-157	1.20E-154	-148	-148
1.206	5.40	1.206	9.60E-148	9.60E-148
Human Gene SWISSPROT- ACC:Q14894 MU-CRYSTALLIN HOMOLOG (NADP-REGULATED THYROID-HORMONE BINDING PROTEIN) - Homo sapiens (Human), 314 aa.	Human Gene SWISSNEW- ACC:P11245 ARYLAMINE N- ACETYLTRANSFERASE, POLYMORPHIC (EC 2.3.1.5) (PNAT) (NAT-2) (ARYLAMINE ACETYLASE) - Homo sapiens (Human), 290 aa.	Human Gene SPTREMBL- ACC:Q15729 THYROTROPH EMBRYONIC FACTOR - HOMO SAPIENS (HUMAN), 303 aa.	Human Gene Homologous to SWISSNEW-ACC:Q12846 SYNTAXIN 4 - Homo sapiens (Human), 297 aa.	Human Gene Homologous to SWISSNEW-ACC:Q12846 SYNTAXIN 4 - Homo sapiens (Human), 297 aa.
UNCLASSI	UNCLASSI FIED	UNCLASSI	UNCLASSI	UNCLASSI
SILENT- CODING	SILENT. CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Thr	Tyr	Thr	Arg	<u>Gi</u>
Thr	Tyr ,	Th	Arg	Gly
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AACCAGCCCACT GTGAGAAGACCA C[G/C]GTGTTCAA GTCTTTGGGAATG GCAG	CCACAATGTTAGG AGGGTATTTTA[C MJATCCCTCCAGT TAACAAATACAGC A	CTGCCATCTTTCA GCCCTCTGAAACI C/TJGTGTCCAGCA CAGAATCTTCCCT GG	GCGCTTCCCAGG TCCGGACAATTCG [G/T]CAGACTATTG TCAAACTGGGGAA TA	GGCAGCTGAAGA TCACCAATGCTGG [G/C]ATGGTGTCT GATGAGGAGTTG GAGC
1054	482	499	350	701
cg43248117 1054	cg44027049	cg43982075 499	cg43942977	cg43942977
187	188	189	190	191

		ω	19
9.60E-148	5.10E-145	5.10E-145	2.80E-144
UNCLASSI Human Gene Homologous to SWISSNEW-ACC:012846 SYNTAXIN 4 - Homo sapiens (Human), 297 aa	Human Gene Homologous to SWISSNEW-ACC:P29218 MYO- INOSITOL-1(OR 4)- MONOPHOSPHATASE (EC 3.1.3.25) (IMP) (INOSITOL MONOPHOSPHATASE) (LITHIUM- SENSITIVE MYO-INOSITOL MONOPHOSPHATASE A1) - Homo sapiens (Human), 277 aa.	Human Gene Homologous to SWISSNEW-ACC:P29218 MYO- INOSITOL-1(OR 4)- MONOPHOSPHATASE (EC 3.1.3.25) (IMP) (INOSITOL MONOPHOSPHATASE) (LITHIUM- SENSITIVE MYO-INOSITOL MONOPHOSPHATASE A1) - Homo sapiens (Human), 277 aa.	Human Gene Homologous to SWISSPROT-ACC:P29692 ELONGATION FACTOR 1-DELTA (EF-1-DELTA) - Homo sapiens (Human), 281 aa.
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Leu	<u>Giy</u>	Ser	Ala
Leu	Gly	Solution of the state of the st	Ala
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GCGAGGTGTTTGT G GTCCAATATCCT[ G/TAAGGACACGC AGGTGACTCGAC AGG	TGTACACTGCCAG AAAAGGAAAAGGI T/GJGCCTTTTGTA ATGGTCAAAAACT AC	TCTTGGTGACTGA GTTGGCCTCTTC[ C/TJAGAACACCAG AGACTGTGAGAAT GG	TAGAGCGCACAC AGGCCTCCAGCT G[A/G]GCCATGTC CGTCTCATCATCC CAAG
773	753	837	321
cg43942977 773	cg43985220	cg43985220	cg43946394
192	193	194	195

8 (8q22)	2 (2p13)	20	19 (19q13.4 )	91
6.90E-141 8 (8q22)	1.20E-111 2 (2p13)	4.80E-110	2.10E-100	6.80E-95
UNCLASSI Human Gene Homologous to SWISSPROT-ACC:P00915 CARBONIC ANHYDRASE I (EC 4.2.1.1) (CARBONATE DEHYDRATASE I) - Homo sapiens (Human), 260 aa.	Human Gene Homologous to SWISSPROT-ACC:Q05195 MAD PROTEIN (MAX DIMERIZER) - Homo sapiens (Human), 221 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAD43195 PEROXISOMAL MEMBRANE PROTEIN PMP 24 - HOMO SAPIENS (HUMAN), 212 aa.	Human Gene Similar to TREMBLNEW-ACC:BAA13472 CD89_U08 - HOMO SAPIENS (HUMAN), 191 aa.	Human Gene Similar to TREMBLNEW-ACC:CAB43107 PRENYLATED RAB ACCEPTOR 1 (PRA1) - HOMO SAPIENS (HUMAN), 185 aa.
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT.	SILENT- CODING
Phe	Leu	\alpha al	Arg	Pro
Phe	Leu	Val	Arg	Pro
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CTGACAGCTACAG C GCTCTTTCAGTT[C MJCATTTTCACTG GGGCAGTACAAAT G	AGAAGTTGAAGG GGCTGGTGCCAC T[T/G]GGACCCGA ATCAAGTCGACAC	TGGGTTCAGGGA TGTAGCCCTTCTC [I/CJACAGCCAGG CGGCTCAGGGCA	GCCAATATAGGAT AGGGCACTACAG[ A/GJTTCCGGTACA GTGACACCCTGG AGC	ACGGGGAGGAGC C TGCAGATGGAAC C[C/T]GTGTGAGG TGTCTTCTGGGAC
1329	735	998	402	629
cg43119818 1329	cg43118279	cg43325007	og39524111	cg43280516
196	197	198	199	200

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1-		(Tzq23)	-	
5.10E-90	1.30E-89	3.80E-85	1.30E-77	5.60E-68
UNCLASSI Human Gene Similar to SPTREMBL- 5.10E-90 FIED ACC:014803 BCL-X/BCL-2 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 168 aa (fragment).	Human Gene Similar to TREMBLNEW-ACC:BAA34941 HUMAN CMAP - HOMO SAPIENS (HUMAN), 167 aa.	Human Gene Similar to SWISSPROT-ACC:P09496 CLATHRIN LIGHT CHAIN A (BRAIN AND LYMPHOCYTE LCA) - Homo sapiens (Human), 248 aa.	Human Gene Similar to SPTREMBL- 1.30E-77 ACC:000496 IPL (IPL) - HOMO SAPIENS (HUMAN), 152 aa.	Human Gene Similar to REMTREMBL-ACC:G36907 T-CELL RECEPTOR ALPHA-CHAIN HAP58 V(A)10.1-J(A)T - HOMO SAPIENS (HUMAN), 135 aa (fragment).
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING
Arg	ren	Pro	nen	Arg
Arg	Leu	Pro	Leu	Arg
⋖	ပ	ပ	<b></b>	<u>ဖ</u>
ပ	ပ	⊢ _	ပ	⋖
AGAGGTTGGGGG GCGCCGAGCGCG A[G/A]CGGCCCCG AAGGGGCTGGG CTCCT	TAGTGAAAGGCCT GAAATATATGCT[G /C]GAGGTGGAAAT TGGCAGAACTACC T	CTCCATCAACAGC ATCCGGACTGCA[ T/C]GGCGGCTCG CCGTGCGGCTGG GGCC	CGACGAGGTGCT ACGCGAGGGCGA G[C/T]TGGAGAG CGCAGCGACAGC CTCTT	TTTTTCCAGCTT ACAATGGTACAG[ A/G]CAGGAGCCT GGGGAAGGTCCT GTCC
871	682	915	136	162
cg43963913 871	cg40262905	cg43918168	cg43259701	cg1527767
201	202	203	204	205

11 (11p15.2 )	7 (7q35)		-	17
5.10E-58	8.50E-56	1.60E-54	2.00E-54	o
UNCLASSI Human Gene Similar to SWISSNEW- 5.10E-58 ACC:P06881 CALCITONIN GENE- RELATED PEPTIDE I PRECURSOR (CGRP-I) (ALPHA-TYPE CGRP) - Homo sapiens (Human), 128 aa.	Human Gene Similar to REMTREMBL-ACC:D1002898 T- CELL RECEPTOR BETA-CHAIN V REGION - HOMO SAPIENS (HUMAN), 112 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).	Human Gene Similar to SWISSNEW- 2.00E-54 ACC:P47992 LYMPHOTACTIN PRECURSOR (CYTOKINE SCM-1) (ATAC) (LYMPHOTAXIN) (SCM-1- ALPHA) - Homo sapiens (Human),	Human Gene SPTREMBL- ID:Q93050 VACUOLAR-TYPE H(+)- ATPASE 115 KDA SUBUNIT - HOMO SAPIENS (HUMAN), 831 aa.
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI	ATPase_as sociated
SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- CODING	SILENT- ATPase NONCODI sociated NG
토	Leu	Th.	Thr	
Th	ren	Thr	Thr	
F	<b>U</b>	ပ	O	gap
O	<b>—</b>	<b> </b>	∢	9
AGAAGAGACCT GTGACACTGCCA C[C/T]TGTGTGACT CATCGCTGGCA GGCT	TCATCCTGAGTTC TAAGAAGCTCCTĮT /CJCTCAGTGACTC TGGCTTCTATCTC T	CTCTGGTTGTCCA CGAGGGAGACAC[ T/C]GTAACTCTCA ATTGCAGTTATGA AG	AAGTCTGTGCTGA A TCCACAAGCCAC[ A/G]TGGGTGAGA GACGTGGTCAGG AGCA	AGGGAGGCGGGG AGGGTAGCATGG G[G/gap]CACACGG CCCTCACAGGGA CTCACT
316	300	317	249	1571
cg40968986 316	cg42550133	cg2526759	cg41664708	cg43300673
206	207	208	209	210

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4.00E-121 6	9.40E-58	0	0	0
ATPase_as Human Gene Homologous to sociated SPTREMBL-ID:Q18788 C52E4.5 - CAENORHABDITIS ELEGANS, 590 aa.	Human Gene Similar to SPTREMBL- ID:Q15332 GAMMA SUBUNIT OF SODIUM POTASSIUM ATPASE LIKE - HOMO SAPIENS (HUMAN), 126 aa.	Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.	Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.	Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.
ATPase_as sociated	ATPase_as sociated	cadherin	cadherin	cadherin
SILENT- ATPase NONCODI sociated NG	SILENT- ATPase NONCODI sociated NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
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∢	ပ	<b> -</b>	<b>-</b>	ပ
gap	∢	ဗ	ව	gap
AGTTGAAATCAGA gap GAGGAATAAAAA[g ap/A]GACATTTTAT ATTTTATTCTGCT CC	TAAGCATGAGGTG A GCACGAGGCAGG A/CJGTTGGCGATG CCACCTGGGGGT CAC	GGTCCCTTGCTT TATCCCAAGCTC  G/TJGAGGGACGC AGCCTGGCATGG	GTCCCTTGCTTT ATCCCAGCTCG G/TJAGGGACGCA GCCTGGCATGGC TCTG	CTTTATCCCAAGC TCGGAGGGACGC[ gap/GJAGCCTGGC ATGGCTCTGGCCT AGCA
2570	196	909	209	615
cg43284434 2570	cg43132502	cg43931765		cg43931765
211	212	213	214	215

<u></u>	<u> </u>		r.	6
0	0	0	0	0
Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.	Human Gene SWISSPROT. ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.	Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.	Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.	Human Gene SWISSPROT- ID:P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR - HOMO SAPIENS (HUMAN), 799 aa.
cadherin	cadherin	cadherin	cadherin	cadherin
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
<b>—</b>	<b>⊢</b>	F	<b> -</b>	F
gap	gap	gap	deb	gap
TAGCAGCCAGGT GACATGGCCAGG C[gap/T]ACCTTCC TGTACAGGCACTG TGGGC	GCCAGGTGACAT GGCCAGGCACCT T[gap/T]CCTGTAC AGGCACTGTGGG CTCCTG	AGGTGACATGGC CAGGCACCTTCCT [gap/TjGTACAGGC ACTGTGGGCTCCT GGCC	AGGTGACATGGC CAGGCACCTTCCT [gap/T]GTACAGGC ACTGTGGGCTCCT GGCC	AGGTGACATGGC CAGGCACCTTCCT [gap/T]GTACAGGC ACTGTGGGCTCCT GGCC
099	665	899	899	899
cg43931765   660	cg43931765	cg43931765	cg43931765   668	cg43931765
216	217	218	219	220

	<del></del>	<del></del>
9	16 (16p11.2 )	1 (1923)
0	0	1.00E-218 1 (1q23)
Human Gene SPTREMBL- ID:Q15065 OB-CADHERIN-1 - HOMO SAPIENS (HUMAN), 796 aa.	Human Gene SWISSPROT- ID:P20701 LEUKOCYTE ADHESION GLYCOPROTEIN LFA-1 ALPHA CHAIN PRECURSOR (LEUKOCYTE FUNCTION ASSOCIATED MOLECULE 1, ALPHA CHAIN) (CD11A) (INTEGRIN ALPHA- L) - HOMO SAPIENS (HUMAN), 1170 aa.	Human Gene SWISSPROT- ID:P14151 L-SELECTIN PRECURSOR (LYMPH NODE HOMING RECEPTOR) (LEUKOCYTE ADHESION MOLECULE-1) (LAM-1) (LEUKOCYTE SURFACE ANTIGEN LEU-8) (TQ1) (GP90-MEL) (LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 1) (LECAM1) (CD62L) - HOMO SAPIENS (HUMAN), 372 aa.
cadherin	cadherin	cadherin
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
U	<b> -</b>	O
۷	ပ	<b>⊢</b>
AATCCACAATCGG A CATCAGGAAGCC[ A/CJAAGTCCCAGT GGCCATTAGGGT CCT	TCCCTATGAGCCT GCAAAGGAGACA GTTCAGGAATGA GTTCCATGTTCGA GA	CAGTGCATCTGG GAAGATTTCTACC[ T/C]GACCAACAGT TCCTTCAGCTTCC AT
4769	1406	1463
cg43952088 4769	cg44010957	cg43956560
221	2222	223

1 (1923)	1 (1923)
1.00E-218   1 (1q23)	1.00E-218
Human Gene SWISSPROT- ID:P14151 L-SELECTIN PRECURSOR (LYMPH NODE HOMING RECEPTOR) (LEUKOCYTE ADHESION MOLECULE-1) (LAM-1) (LEUKOCYTE SURFACE ANTIGEN LEU-8) (TQ1) (GP90-MEL) (LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 1) (LECAM1) (CD62L) - HOMO SAPIENS (HUMAN), 372 aa.	Human Gene SWISSPROT- ID:P14151 L-SELECTIN PRECURSOR (LYMPH NODE HOMING RECEPTOR) (LEUKOCYTE ADHESION MOLECULE-1) (LAM-1) (LEUKOCYTE SURFACE ANTIGEN LEU-8) (TQ1) (GP90-MEL) (LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 1) (LECAM1) (CD62L) - HOMO SAPIENS (HUMAN), 372 aa.
cadherin	cadherin
SILENT- NONCODI NG	SILENT- NONCODI NG
⋖	∢
ပ	ပ
CAACAGTTCCTTC G AGCTTCCATTTC[G /A]CCCCTCATTTA TCCCTCAACCCCC A	TGCTCTCCTTTCC CCTGCCCCAGA[ C/A]CTTTTATCCA CTTACCTAGATTC TA
cg43956560 1492	cg43956560 2242
224	225

-			5 (5p13)	9 (9q34.3)
4.10E-183 1	0	0	0	1.40E-104
Human Gene SWISSPROT- ID:P43235 CATHEPSIN K PRECURSOR (EC 3.4.22.38) (CATHESPIN O) (CATHEPSIN X) (CATHEPSIN O2) - HOMO SAPIENS (HUMAN), 329 aa.	Human Gene SWISSPROT. ID:P27658 COLLAGEN ALPHA 1(VIII) CHAIN PRECURSOR (ENDOTHELIAL COLLAGEN) - HOMO SAPIENS (HUMAN), 744 aa.	Human Gene SWISSPROT- ID:P27658 COLLAGEN ALPHA 1(VIII) CHAIN PRECURSOR (ENDOTHELIAL COLLAGEN) - HOMO SAPIENS (HUMAN), 744 aa.	complement Human Gene SWISSPROT- ID:P10643 COMPLEMENT COMPONENT C7 PRECURSOR - HOMO SAPIENS (HUMAN), 843 aa.	complement Human Gene Homologous to SWISSPROT-ID:P07360 COMPLEMENT C8 GAMMA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 202 aa.
cathepsin	collagen	collagen	complement	complement
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
4	ပ	ပ	O	ပ
  -	U	U	A	၁
TGGCCACAGTGA AAAAGGTCATGG G[T/A]GGAGAGAA GCAAAGTAGGAA GGATC	ACCGCACCCTTTC CACCGGTGGGGG [C/G]CCCAGTGAA GTTTAACAAACTG CTG	CATACCACGTTCA CTGCAAGGGGGG[ C/GJAACGTGTGG GTTGCTCTATTCA AGA	GAAACCCAGTAG , GCTCCTGGAGGC C[A/C]TGGTCAGC TTGCTTGGAATCC AGCA	TGGTGGTGCTAC CCTTGGCCTCCCA [C/G]AGTCCTGCC ACCTGCTGCCG CCAC
428	1972	2096	2546	64
cg43264626 428	cg43011543	cg43011543	cg43933757	cg41553795
226	227	228	229	230

(S.	17 (17q11.2 )
1.20E-189	1.50E-107
Human Gene SWISSPROT- ID:P40225 THROMBOPOIETIN PRECURSOR (MEGAKARYOCYTE COLONY STIMULATING FACTOR) (C-MPL LIGAND) (ML) (MEGAKARYOCYTE GROWTH AND DEVELOPMENT FACTOR) (MGDF) - HOMO SAPIENS (HUMAN), 353 aa.	Human Gene Homologous to SWISSPROT-ID:P09919 GRANULOCYTE COLONY- STIMULATING FACTOR PRECURSOR (G-CSF) (PLURIPOIETIN) - HOMO SAPIENS (HUMAN), 207 aa.
Jso	jso
SILENT- NONCODI NG	SILENT- NONCODI NG
<b>-</b>	<u> </u>
U	O
ACCCGGATAGATT CCTCACCCTTGG CCTCGCCTTTGC CCCACCCTACTCT GC	GTGCCTGGACATT TGCCTTGCTGGA[ C/TJGGGGACTGG GGATGTGGGAGG GAGC
179	1356
cg42542496	cg41533258
232	233
	cg42542496 179 ACCCGGATAGATT C T SILENT- csf Human Gene SWISSPROT- 1.20E-189 3- CCTCACCCTTGG[ NONCODI CCTCACCCTTGG[ NONCODI CCTCACCCTTGG[ CCTCACCCTTGG[ CCTCACCCTTGG[ CCTCACCCTTGG

ις.	10
1.10E-77	5.80E-303
Human Gene Similar to SWISSNEW- 1.10E-77 ID:P08700 INTERLEUKIN-3 PRECURSOR (IL-3) (MULTIPOTENTIAL COLONY-STIMULATING FACTOR) (HEMATOPOIETIC GROWTH FACTOR) (MAST-CELL GROWTH FACTOR) (MAST-CELL GROWTH FACTOR) (MGGF) - HOMO SAPIENS (HUMAN), 152 aa. pcls:SWISSPROT-ID:P08700 INTERLEUKIN-3 PRECURSOR (IL-3) (MULTIPOTENTIAL COLONY-STIMULATING FACTOR) (HEMATOPOIETIC GROWTH FACTOR) (P-CELL STIMULATING FACTOR) (F-CELL STIMULATING FACTOR) (MAST-CELL GROWTH FACTOR) (MAST-CELL GROWTH FACTOR) (MGGF) - HOMO SAPIENS (HUMAN), 152 aa.	Human Gene SWISSPROT- ID:P00367 GLUTAMATE DEHYDROGENASE 1 PRECURSOR (EC 1.4.1.3) (GDH) - HOMO SAPIENS (HUMAN), 558 aa.
င်္ခ	dehydrogen ase
SILENT- NONCODI NG	SILENT- NONCODI NG
ပ	ပ
deb	ဖ
ACGACTTTGAGCC gap TCGCGATCTTT[g ap/GJAGTCCAACG TCCAGCTCGTTCT CTG	TGCGGCTTAAAAG G GGCAACCGCGCG G/CJGGACCCTTCC TCCCTAGTCGCG GGG
	225
	cg44036323
234	235

(7q31)	4 (4q22)	
5.10E-272 7 <sub>1</sub> (7q31)	1.30E-209 4	0
SILENT- dehydrogen Human Gene SPTREMBL- NONCODI ase ID:Q14131 DIHYDROLIPOAMIDE NG DEHYDROGENASE - HOMO SAPIENS (HUMAN), 511 aa.	Human Gene SWISSNEW- ID:P08319 ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (EC 1.1.1.1) - HOMO SAPIENS (HUMAN), 391 aa. [pcls:SWISSPROT-ID:P08319 ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (EC 1.1.1.1) - HOMO SAPIENS (HUMAN), 391 aa.	Human Gene SWISSNEW- ID:P19838 NUCLEAR FACTOR NF- KAPPA-B P105 SUBUNIT (DNA- BINDING FACTOR KBF1) (EBP-1) [CONTAINS: NUCLEAR FACTOR NF-KAPPA-B P50 SUBUNIT] - HOMO SAPIENS (HUMAN), 969 aa. pcls:SWISSPROT-ID:P19838 NUCLEAR FACTOR NF-KAPPA-B P105 SUBUNIT (CONTAINS: NUCLEAR FACTOR NF- KAPPA-B P50 SUBUNIT) (DNA-BINDING FACTOR KBF1) (EBP-1) - HOMO SAPIENS (HUMAN), 969 aa.
dehydrogen ase	ydrogen	SILENT- dna_ma_bi
SILENT- deh NONCODI ase NG	SILENT- deh NONCODI ase NG	SILENT- NONCODI NG
<b>—</b>	ဖ	O
O	deb	deb
GAGAGACCATTTA C CTTACATCAGTT[C //JGGTTTATAGAC ATTGAATCATAT C	AGTTTCATTATAC TTTTCTCTCCAC[g ap/G]TTTTGTCTAT GTTGAAAATTTTC TG	ACAAGACAGAAG CTGAAGTGCATCC [gap/C]AAAGGTGC TCAGAGAGCCGG CCCGC
766	1995	3691
cg43918671	cg43057018	cg44005808
236	237	238

	0	10
0	1.40E-159	1.40E-159 10
dna_rna_bi Human Gene SWISSNEW- nd	Human Gene SPTREMBL- ID:Q99612 DNA-BINDING PROTEIN CPBP - HOMO SAPIENS (HUMAN), 290 aa (fragment).	dna_rna_bi Human Gene SPTREMBL- ID:Q99612 DNA-BINDING PROTEIN CPBP - HOMO SAPIENS (HUMAN), 290 aa (fragment).
dna_rna_bi	dna_rna_bi nd	dna_rna_bi nd
SILENT- dra	SILENT- dr. NONCODI nd NG	SILENT- dn NONCODI nd NG
ပ	<b>V</b>	⊢
дар	gap	gap
TCTTCCTTCTCCA gap GCCGGCAGGCCC [gap/G]CGCCGCTT AGGAGGGAGAGC CCACC	TGGCGAGTCCAG GGTCACCCACATA [gap/A]CCATGCAC CACGGGTGCTAT GCCGC	GAGTCCAGGGTC ACCCACATACCAT [gap/T]GCACCACG GGTGCTATGCCG CTTCT
630	1244	1248
cg44005808 630	cg43956159	cg43956159
239	240	241

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10	10		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1.40E-159 10	1.40E-159	1.40E-159	1.30E-60
Human Gene SPTREMBL- ID:Q99612 DNA-BINDING PROTEIN CPBP - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene SPTREMBL- ID:Q99612 DNA-BINDING PROTEIN CPBP - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene SPTREMBL- ID:Q99612 DNA-BINDING PROTEIN CPBP - HOMO SAPIENS (HUMAN), 290 aa (fragment).	Human Gene Similar to SWISSNEW-ID:Q02535 DNA-BINDING PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR HLH 1R21) (HELIX-LOOP-HELIX PROTEIN HEIR-1) - HOMO SAPIENS (HUMAN), 119 aa. pcls:SWISSPROT-ID:Q02535 DNA-BINDING PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR HLH 1R21) (HELIX-LOOP-HELIX PROTEIN HEIR-1) - HOMO SAPIENS (HUMAN), 119 aa.
dna_ma_bi nd	dna_rna_bi nd	dna_rna_bi nd	dna_rna_bi
SILENT- dra NONCODI nd NG	SILENT- dr. NONCODI nd NG	SILENT- dne NONCODI nd NG	SILENT- dna_rna_NONCODI nd_inhib_NG
⋖	ပ	ပ	<b>-</b>
<u>ق</u>	ဖ	gap	O
TACCATGCACCAC G GGGTGCTATGCC[ G/A]CTTCTTACAG GACCTTTTAGCC CT	CCTGGAGGCAAC TGGGTAGGGTGC A(G/CJAACGGCAT GCTTTGGCTGGAA CACG	CAGAACGGCATG CTTTGGCTGGAAC [gap/C]ACGCATCC CTCCTTCCACGGC CGGC	CAGAGCTAGCTCT GGCTCTTCAGGC C/TJACAAGTTCAC AGTCCTTCGCTCC TG
1268	1342	1364	177
cg43956159	cg43956159	cg43956159	cg43971258
242	243	244	245

(1p36.13	9 (9p24)	9 (9p24)	9 (9p24)
1.30E-60	0	0	0
Human Gene Similar to SWISSNEW- 1.30E-60 ID:Q02535 DNA-BINDING PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR HLH 1R21) (HELIX- LOOP-HELIX PROTEIN HEIR-1) - HOMO SAPIENS (HUMAN), 119 aa. [pcls:SWISSPROT-ID:Q02535 DNA-BINDING PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR HLH 1R21) (HELIX-LOOP-HELIX PROTEIN HEIR-1) - HOMO SAPIENS (HUMAN), 119 aa.	Human Gene SWISSPROT- ID:P98155 VERY LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR (VLDL RECEPTOR) HOMO SAPIENS (HUMAN), 873 aa.	Human Gene SWISSPROT- ID:P98155 VERY LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR (VLDL RECEPTOR) - HOMO SAPIENS (HUMAN), 873 aa.	Human Gene SWISSPROT- ID:P98155 VERY LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR (VLDL RECEPTOR) - HOMO SAPIENS (HUMAN), 873 aa.
SILENT- dna_ma_bi NONCODI nd_inhib NG	ebh	ude .	hqe
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
O	U	ပ	ပ
<b>—</b>	gap	gap	∢
GTCCTTCGCTCCT GAGCACCAGGTT T/CJAGTCTCCAGG AAGGGATTTGGTG AA	GATACCTTTGCGT GGATCAAGCTTG[ gap/C]TGTACTTGA CCGTTTTATATTA CT	CAAAAAATTTAT AAACTAATTTG[g ap/G]TACGTATGA ATGATATCTTTGA CCT	CCTCCTTCTCCCC CTTTCCCCTCCC[ A/C]GCCCCCACCT TCTTCCTCCTTC GG
208	3373	3739	514
cg43971258 508	cg43982507	cg43982507	cg43982507
246	247	248	249

		<del>,</del>
(11q23)	- (3)	ရ
1.80E-203   11 (11c	1.80E-203	0
Human Gene SWISSNEW- ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa. pcis:SWISSPROT-ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.	Human Gene SWISSNEW- ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa. [pcis:SWISSPROT-ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.	Human Gene SWISSPROT- ID:P51178 1- PHOSPHATIDYLINOSITOL 4,5- BISPHOSPHATE PHOSPHODIESTERASE DELTA 1 (EC 3.1.4.11) (PLC-DELTA-1) (PHOSPHOLIPASE C-DELTA-1) (PLC-III) - HOMO SAPIENS (HUMAN), 756 aa.
ebh	<b>d</b>	esterase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
<b>⊢</b>	<b>⊢</b>	O
de	gap	ပ
CTGCCCTGCCAC CTGTCTGTCTGTC [gap/T]CCAAAGAA GTTCTGGTATGAA CTTG	CTGCCCTGCCAC CTGTCTGTCTGTC [gap/TJCCAAAGAA GTTCTGGTATGAA CTTG	TCCCTCCAGGACT AGGCTGGAGGAA[ G/C)CCAGTGGGG TCCCCCTGAGT GGGC
	1371	2376
cg41554010 1371	cg41554010	cg43984905
250	251	252

m		(11pter)
0	0	1.80E-195
Human Gene SWISSPROT- ID:P51178 1- PHOSPHATIDYLINOSITOL-4,5- BISPHOSPHATE PHOSPHODIESTERASE DELTA 1 (EC 3.1.4.11) (PLC-DELTA-1) (PHOSPHOLIPASE C-DELTA-1) (PLC-III) - HOMO SAPIENS (HUMAN), 756 aa.	glycoprotein Human Gene SWISSPROT-ID:P08183 MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1) - HOMO SAPIENS (HUMAN), 1280 aa.	glycoprotein Human Gene SWISSPROT- ID:P16070 CD44 ANTIGEN PRECURSOR (PHAGOCYTIC GLYCOPROTEIN I) (PGP-1) (HUTCH-I) (EXTRACELLULAR MATRIX RECEPTOR-III) (ECMR-III) (GP90 LYMPHOCYTE HOMING/ADHESION RECEPTOR) (HERMES ANTIGEN) (HERMES ANTIGEN) (HEPARAN SULFATE PROTEOGLYCAN) (EPICAN) (CDW44) - HOMO SAPIENS (HUMAN), 742 aa.
esterase	glycoprotein	glycoprotein
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
·		·
<u>ပ</u> ပ	<b>⋖</b>	<u>&lt;</u>
CACATGTGGGGA CAGGGCTGGTGT G[G/C]CTGCTCCC AGCCTCTTGCTCA GAGC	CTAAAGTCGGAGT ATCTTCTTCCAA[G /AJATTTCACGTCT TGCCGCCGTTC CA	TTCTAGAGGGG GTCTGTTGAAGAT [G/A]TGTAACTAGT ACACCCCAACCC CCA
2440	382	267
cg43984905 2440	cg43992911	cg43932434
253	254	255

		<del></del>
11 (11pter)		(1921)
1.80E-195   11   (1.		3.10E-185 1 (1q21)
glycoprotein Human Gene SWISSPROT- ID:P16070 CD44 ANTIGEN PRECURSOR (PHAGOCYTIC GLYCOPROTEIN I) (PGP-1) (HUTCH-I) (EXTRACELLULAR	MATRIX RECEPTOR-III) (ECMR-III) (GP90 LYMPHOCYTE HOMING/ADHESION RECEPTOR) (HERMES ANTIGEN) (HYALURONATE RECEPTOR) (HEPARAN SULFATE PROTEOGLYCAN) (EPICAN) (CDW44) - HOMO SAPIENS (HUMAN), 742 aa.	glycoprotein Human Gene SWISSNEW- ID:P15813 T-CELL SURFACE GL YCOPROTEIN CD1D PRECURSOR (CD1D ANTIGEN) (R3G1) - HOMO SAPIENS (HUMAN), 335 aa.lpcls:SWISSPROT-ID:P15813 T- CELL SURFACE GLYCOPROTEIN CD1D PRECURSOR (CD1D ANTIGEN) (R3G1) - HOMO SAPIENS (HUMAN), 335 aa.
		glycoprotein
SILENT- NONCODI NG		SILENT- NONCODI NG
<u>o</u>		O
⋖		⋖
CCCCAACCCCCA A ACCTCAGTGGAAA [A/G]CAATGCCCA GGGATTAGGCTAT GGA		GCGCAGGTCAGA GGGCGCCGCAG C[A/G]GGCCTCCG CGAGGTCCCCAC GCCGG
		366
cg43932434 306		cg43318219
256		257

		<del></del>	
2	5	6 (6p25)	6 (6p25)
8.20E-67	8.20E-67	8.90E-61	8.90E-61
glycoprotein Human Gene Similar to SWISSPROT-ID::Q08878 FIBULIN-1, ISOFORM C PRECURSOR (BASEMENT-MEMBRANE PROTEIN 90) (BM-90) - MUS MUSCULUS (MOUSE), 685 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:Q08878 FIBULIN-1, ISOFORM C PRECURSOR (BASEMENT-MEMBRANE PROTEIN 90) (BM-90) - MUS MUSCULUS (MOUSE), 685 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:P49222 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - MUS MUSCULUS (MOUSE), 690 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:P49222 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - MUS MUSCULUS (MOUSE), 690 aa.
glycoprotein	glycoprotein	glycoprotein	glycoprotein
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
deb	gap	<b>⊢</b>	<b>⊢</b>
<b>⊢</b>	<b>⊢</b>	U	∢
CTCTATACTGTAC ACTCACCCATAA[T /gap]TCAAACAATT ACACCATGGTATA AA	TCTATACTGTACA CTCACCCATAATIT /gap]CAAACAATTA CACCATGGTATAA AG	GCCGAATAGCCT GGGTTTGGAAAA G[C/T]ATGTTTTTG AAATATGTGGGAT CTC	TACTGACCTAAAT CACACCCTAGACI ATJTATCAGAGGG AAATTCTGACCAT AA
1954	1955	1411	385
cg43967861 1954	cg43967861	cg43965366	cg43965366
258	259	260	261

12	_	_		
3.30E-54	1.20E-224	1.20E-224	1.20E-224	1.60E-206
glycoprotein Human Gene Similar to SWISSPROT-ID:P13983 EXTENSIN PRECURSOR (CELL WALL HYDROXYPROLINE-RICH GLYCOPROTEIN) - NICOTIANA TABACUM (COMMON TOBACCO), 620 aa.	Human Gene SWISSPROT. ID:P50219 HOMEOBOX PROTEIN HB9 - HOMO SAPIENS (HUMAN), 401 aa.	Human Gene SWISSPROT- ID:P50219 HOMEOBOX PROTEIN HB9 - HOMO SAPIENS (HUMAN), 401 aa.	Human Gene SWISSPROT- ID:P50219 HOMEOBOX PROTEIN HB9 - HOMO SAPIENS (HUMAN), 401 aa.	Human Gene TREMBLNEW- ID:G2896172 LIM HOMEOBOX PROTEIN COFACTOR - HOMO SAPIENS (HUMAN), 373 aa.
glycoprotein	homeobox	homeobox	homeobox	homeobox
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
<u> </u>	O	O	<b>-</b>	ပ
<	gap	gap	ပ	<b>⊢</b>
TGTCCTTGAAGAA CATGCACTTGGC[ A/G]CGGATGGCA CAAGCAAAATGGT AGA	CCCGCGCCCCAG TAGGAGCCCCGC Glgap/GlCCCAGCA GGTGCGGCGCGC ACGGAG	CCAGCAGGTGCG GCGCGCACGGAG C[gap/G]CGCCGG CCGGCGGCTTCT CCCGGAG	TGAAACTTGAAAC CGCCTCTGGAGC[ C/TJGCCATTCTGC AGAGTATTTGGAA AA	TCCAAGAAAGGGT CATGGAAGCTTA[ T/CJTGGGAATAAT CCTCTCAATTAGA AA
1255	1397	1423	1817	939
cg43322513	cg41637704	cg41637704	cg41637704	cg43980506
262	263	264	265	266

10	16 (16q22)	16 (16q22)	7 (7p21)
1.30E-156 10	2.00E-220 16 (16	2.00E-220	3.40E-108 7 (7p21)
Human Gene SWISSPROT- ID:P37980 INORGANIC PYROPHOSPHATASE (EC 3.6.1.1) (PYROPHOSPHATE PHOSPHO- HYDROLASE) (PPASE) - BOS TAURUS (BOVINE), 289 aa.	hydroxyster Human Gene SPTREMBL- oid ID:Q13194 11-BETA- HYDROXYSTEROID DEHYDROGENASE TYPE 2 - HOMO SAPIENS (HUMAN), 405 aa.	hydroxyster Human Gene SPTREMBL- oid ID:Q13194 11-BETA- HYDROXYSTEROID DEHYDROGENASE TYPE 2 - HOMO SAPIENS (HUMAN), 405 aa.	Human Gene Homologous to SWISSPROT-ID:P05231 INTERLEUKIN-6 PRECURSOR (IL- 6) (B-CELL STIMULATORY FACTOR 2) (BSF-2) (INTERFERON BETA-2) (HYBRIDOMA GROWTH FACTOR) - HOMO SAPIENS (HUMAN), 212 aa.
hydrolase	hydroxyster oid	hydroxyster oid	interleukin
SILENT- NONCODI NG	SILENT- hyd NONCODI oid NG	SILENT- hyd NONCODI oid NG	SILENT- NONCODI NG
<b>-</b>	дар	gap	<del>L</del>
<del>ပ</del>		ပ	deb
GGGGGGTTTTTT   G   TTTTTCTCTG[G/   TTTTTTTTTTT	CTGGGGGTTTTC GGGGAGGAACCA A[G/gap]GGCTCAC GGAGCCTCCTGT GCTGCA	GGGGGTTTTCGG GGAGGAACCAAG G[G/gap]CTCACGG AGCCTCCTGTGCT GCAGT	GAGTTAATTTATG TAAGTCATATTTIg ap/TJATATTTTTAA GAAGTACCACTTG AA
100	503	505	1031
cg43961305 100	cg43998672	cg43998672	cg42908571
267	268	269	270

7 (7p21)	2 (2q35)	ري د
3.40E-108 7 (7p21)	9.60E-191 2 (2q35)	1.60E-156
Human Gene Homologous to SWISSPROT-ID:P05231 INTERLEUKIN-6 PRECURSOR (IL- 6) (B-CELL STIMULATORY FACTOR 2) (BSF-2) (INTERFERON BETA-2) (HYBRIDOMA GROWTH FACTOR) - HOMO SAPIENS (HUMAN), 212 aa.	interleukinre Human Gene SWISSPROT- cept ID:P25025 HIGH AFFINITY INTERLEUKIN-8 RECEPTOR B (IL- 8R B) (CXCR-2) (GRO/MGSA RECEPTOR) (IL-8 RECEPTOR TYPE 2) - HOMO SAPIENS (HUMAN), 360 aa.	Human Gene SWISSPROT- ID:P46926 PUTATIVE GLUCOSAMINE-6-PHOSPHATE ISOMERASE (EC 5.3.1.10) (GLUCOSAMINE- 6-PHOSPHATE DEAMINASE) (OSCILLIN) (KIAA0060) - HOMO SAPIENS (HUMAN), 289 aa.
interleukin	interleukinre cept	isomerase
SILENT- NONCODI NG	SILENT- inter NONCODI cept NG	SILENT- NONCODI NG
F	U	တ
de B	<b>—</b>	∢
CTTACCTCAAATA gap AATGGCTAACTT[g ap/TJATACATATTT TTAAAGAAATATTT A	CAGCCCCATTGT GGTCACAGGAAG[ T/C]AGAGGAGGC CACGTTCTTACTA GTT	CCCAACCTGGGTT A TGGCAGACATCA[ A/GJAATGATGAGAG TACATTTTGCAGA TA
1	1617	1133
cg42908571 1178	cg42164914	cg43958501
271	272	273

		<u>6</u>
10	9	(Xq21.3)
1.60E-156 5		
0E-1		
6. 6.	0	0
Human Gene SWISSPROT- ID:P46926 PUTATIVE GLUCOSAMINE-6-PHOSPHATE ISOMERASE (EC 5.3.1.10) (GLUCOSAMINE- 6-PHOSPHATE DEAMINASE) (OSCILLIN) (KIAA0060) - HOMO SAPIENS (HUMAN), 289 aa.	Human Gene SWISSPROT- ID:Q04759 PROTEIN KINASE C, THETA TYPE (EC 2.7.1) (NPKC- THETA) - HOMO SAPIENS (HUMAN), 706 aa.	Human Gene SWISSPROT- ID:Q06187 TYROSINE-PROTEIN KINASE BTK (EC 2.7.1.112) (BRUTON'S TYROSINE KINASE) (AGAMMAGLOBULINAEMIA TYROSINE KINASE) (ATK) (B CELL PROGENITOR KINASE) (BPK) - HOMO SAPIENS (HUMAN), 659 aa.
isomerase	kinase	kinase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
Α	ပ	U
<u>ဖ</u>	<b>L</b>	A
CACCCCAGGTT CTCCTAGTTCAGA [G/A]AAAAGCTGT GAAAGTGGAAGA AGGA	TTTATTCTATTCCT ATCTGTGGATG[T/ G]GTAAATGGCTG GGGGGCCAGCCC TG	AGCCTTTGTGCTC A CCACTCAATACA[A ICJAAAGGCCCCTC TCTACATCTGGGA A
805	2710	2259
cg43958501 805	cg43090990 2710	cg42879455
274	275	276

	·		
X (Xq21.3)			
×°	6	ი	6
0	1.40E-290	1.40E-290	1.40E-290
Human Gene SWISSPROT- ID:Q06187 TYROSINE-PROTEIN KINASE BTK (EC 2.7.1.112) (BRUTON'S TYROSINE KINASE) (AGAMMAGLOBULINAEMIA TYROSINE KINASE) (ATK) (B CELL PROGENITOR KINASE) (BPK) - HOMO SAPIENS (HUMAN), 659 aa.	Human Gene SPTREMBL- ID:Q92749 TYPE I PHOSPHATIDYLINOSITOL-4- PHOSPHATE 5-KINASE BETA (EC 2.7.1.68) (STM-7 PROTEIN) - HOMO SAPIENS (HUMAN), 540 aa.	Human Gene SPTREMBL- ID:Q92749 TYPE I PHOSPHATIDYLINOSITOL-4- PHOSPHATE 5-KINASE BETA (EC 2.7.1.68) (STM-7 PROTEIN) - HOMO SAPIENS (HUMAN), 540 aa.	Human Gene SPTREMBL- ID:Q92749 TYPE I PHOSPHATIDYLINOSITOL-4- PHOSPHATE 5-KINASE BETA (EC 2.7.1.68) (STM-7 PROTEIN) - HOMO SAPIENS (HUMAN), 540 aa.
kinase	kinase	kinase	kinase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
o	⊢	⋖	<b> </b>   <b>⊢</b>
<b>4</b>	O	O <sub></sub>	gap
AAAAAGGCCCTC A TCTACATCTGGG[ A/GJATGCACCTCT TCTTTGATTCCCT GG	AGCAACTTGGCTG C AGCCCCACTACA[ C/TJACAGAGAAAT CATCAACCTGACT TA	TAAGAGTTTTCAA GATGTCAAACTT[C /AJAGGCTGATCAG CAGATGGGATGT GA	TTTTTAAAAATCCA gap TCCACACACATga p/TjGGTAAATTAA GTATAAATTCTTTT G
2283	2151	2200	2451
cg42879455 2283		cg43971741	cg43971741 2451
277	278	279	280

19	. 10		17	
5.60E-267   19	5.60E-267	7.80E-173	1.40E-79	5.30E-55
Human Gene SWISSPROT- ID:P49840 GLYCOGEN SYNTHASE KINASE-3 ALPHA (EC 2.7.1.37) (GSK-3 ALPHA) - HOMO SAPIENS (HUMAN), 483 aa.	Human Gene SWISSPROT- ID:P49840 GLYCOGEN SYNTHASE KINASE-3 ALPHA (EC 2.7.1.37) (GSK-3 ALPHA) - HOMO SAPIENS (HUMAN), 483 aa.	Human Gene SPTREMBL- ID:Q15599 TYROSINE KINASE ACTIVATOR PROTEIN 1 (TKA-1) - HOMO SAPIENS (HUMAN), 450 aa.	Human Gene Similar to SPTREMBL-ID:Q15599 TYROSINE KINASE ACTIVATOR PROTEIN 1 (TKA-1) - HOMO SAPIENS (HUMAN), 450 aa.	Human Gene Similar to SWISSPROT-ID:P20505 30 KD PROTEIN KINASE HOMOLOG (EC 2.7.1-) (PROTEIN B1) - VACCINIA VIRUS (STRAIN COPENHAGEN), 300 aa.
kinase	kinase	kinase	kinase	kinase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
gap	gap	ပ	ග	⋖
<u>ග</u>	ග	deb	⋖	<u> </u>
AACGTCGATTCGC G ACCGTCCAACCT[ G/gapJGCCCCGCC CCTCCTACAGCTG TAAC	ACGTCGATTCGCA CCGTCCAACCTG G/gapJCCCCGCCC CTCCTACAGCTGT AACT	CACTTAATACCAG AGACCCCCCCC gap/CJTCCCCTCC CCCTTCCCTCC CCTTCCCTCCC	AGACGTGTCTGC CACAGGTCTCAG G[A/G]TAACAGAT GCCCTGTCCACT GAGAG	TTTGATGGAAAGG TTGTCCACACTG[ G/A]GAATTATCAC ACACTTGATCAGG AA
1996	1997	1535	306	1876
cg43947749 1996	cg43947749	cg44131752		cg43928048
281	282	283	284	285

9 (9p21)	(19q13.1
2.60E-53 9 (9p21)	0
SILENT- kinaseinhibit Human Gene Similar to NONCODI or SWISSPROT-ID:P42771 CYCLIN- NG DEPENDENT KINASE 4 INHIBITOR A (CDK4I) (P16-INK4) (P16-INK4A) (MULTIPLE TUMOR SUPPRESSOR 1) (MTS1) - HOMO SAPIENS (HUMAN), 156 aa.	kinaserecep Human Gene SWISSNEW- ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa.lpcls:SWISSPROT-ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa.
kinaseinhibit or	kinaserecep tor
SILENT- Kir NONCODI OT NG	SILENT- kin NONCODI tor NG
	,
Σ	O
O	<b>A</b>
CCCTCCGGATTC C GGCGCGCGTGCG G[C/M]CCGCCGCGCGGA AGTGAGGGTTTTC GTGG	TCCAAGCTAAGCA A CTGCCACTGGGG[ A/GJAAACTCCACC TTCCCACTTTCCC AC
208	2943
cg42714751 208	cg43322545
286	287

19 (19q13.1 )	19 (19q13.1 )	16
0	0	0
kinaserecep Human Gene SWISSNEW- ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa. pcls:SWISSPROT-ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa.	kinaserecep Human Gene SWISSNEW- ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa. pcls:SWISSPROT-ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa.	Human Gene SPTREMBL- ID:Q14807 KID (KINESIN-LIKE DNA BINDING PROTEIN) - HOMO SAPIENS (HUMAN), 665 aa.
kinaserecep tor	kinaserecep tor	kinesin
SILENT- kin NONCODI tor NG	SILENT- kin NONCODI tor NG	SILENT- NONCODI NG
ပ	ပ	ပ
ပ	O	∢
CCACCTCCATCCC C AGACAGGTCCCT[ C/G]CCCTTCTCTG TGCAGTAGCATCA CC	CACCTCCATCCCA (GACAGGTCCTC[C/G]CCTTCTCTGTGCAGGTAGCATCACCTCACCTCACCTTCACCTTCACCTTACCATCACCTTACCTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTTACCTACCTTACCTTACCTTACCTTACCTTACCTTACCTACCTTACCTAC	GTCTGATAGAAGA A GGAGCAGGAGAA[ A/G]CAAATCGTTA AAACCTAGCGAAT TC
3037	3038	1040
cg43322545 3037	cg43322545	cg43980494
288	589	290

4	6 (6p21.3)	6 (6p21.3)	19	
1.90E-304 14	3.40E-147	3.70E-134	1.80E-113	3.50E-81
Human Gene SWISSPROT- ID:Q07866 KINESIN LIGHT CHAIN (KLC) - HOMO SAPIENS (HUMAN), 569 aa.	Human Gene Homologous to SWISSPROT-ID:P13765 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DO BETA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 273 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	misc_chann Human Gene Similar to SPTREMBL-ID:P91197 SIMILAR TO LIGAND-GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.
Kinesin	МНС	МНС	MHC	misc_chann el
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
ပ	O	U	O	ပ
⋖	⋖	∢	F	F
TCAGGAGCAAGG A CGAATGTATGACA [A/C]CATGTCCACA ATGGTGTACATAA AG	TTCTGAAGAGGCT GACGATTTTACTIA /GJTCTCATTTTTT CCTTTCTCCAGAA	CTAGCTTCCCTTC CCATTCAACACA[A /CJACACACATTCT TGCTCTACCCAAA G	TGTCTCAAACCCA GCTTGCCAGCTC T/CJAATGTACCAG CAGCTGGAATCTG AA	GTGGCTGGGCTA TTCCATCCATCTGI T/GJAAGCACATTT GAGCCTCCAGGC TTC
374	305	1167	1122	2506
cg43925424	cg42479188	cg42686658	cg38337333	cg27803682
291	292	293	294	295

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			-	·
7.90E-79	7.90E-79	7.90E-79	2.30E-71	0
misc_chann Human Gene Similar to SPTREMBL- 7.90E-79 el ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	misc_chann Human Gene Similar to SPTREMBL- 7.90E-79 el ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	misc_chann Human Gene Similar to SPTREMBL- 7.90E-79 el ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	misc_chann Human Gene Similar to SPTREMBL- 2.30E-71 ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	Human Gene SWISSPROT- ID:P15498 VAV PROTO- ONCOGENE - HOMO SAPIENS (HUMAN), 846 aa.
misc_chann el	misc_chann el	misc_chann el	misc_chann el	oncogene
SILENT- m NONCODI el NG	SILENT- MI NONCODI el NG	SILENT- NONCODI el NG	SILENT- NONCODI el NG	SILENT- NONCODI NG
ပ	ပ	<u>o</u>	O	O
<b>-</b>	<u> </u>	∢	⋖	gap
CGAGCGGCACCC AGAGCCTGCACC C[T/G]CCCTCACC GTCCTTCTGCGTC CCCC	AGGAGCCCTCTTC GGTGTCCCCGAG T/CJGCCACGGTCA AGACCCGCAGCA CCA	CGGTCAAGACCC GCAGCACCAAG C[A/G]CCGCCCC GCACCTGCCCCT	GAGCCGTGTGGC TGTGGCCTCCGG G[A/C]GGCGGTGG ACGCGTGCGCT TCATC	GGGTGCACGGCC GGCCCTGGGCAG G[gap/C]GTAGCCA TGGAGCTGTGGC GCCAAT
1440	1860	1890	1541	88
cg21413267 1440	cg21413267	og21413267	cg42481172 1541	cg39518465
296	297	298	299	300

	<del>,</del>		
22 (22q11)		ω	
2.40E-84	1.40E-62	3.90E-62	8.00E-257
Human Gene Similar to SWISSPROT-ID: Q64010 PROTO- ONCOGENE C-CRK (P38) (ADAPTER MOLECULE CRK) - MUS MUSCULUS (MOUSE), 304 aa.	Human Gene Similar to SWISSPROT-ID:P31695 NEUROGENIC LOCUS NOTCH HOMOLOG PROTEIN 4 PRECURSOR (TRANSFORMING PROTEIN INT-3) - MUS MUSCULUS (MOUSE), 1964 aa.	Human Gene Similar to TREMBLNEW-ID:G2952331 ARG/ABL-INTERACTING PROTEIN ARGBP2A - HOMO SAPIENS (HUMAN), 666 aa.	Human Gene SWISSNEW- ID:P08684 CYTOCHROME P450 3A4 (EC 1.14.14.1) (CYPIIIA4) (NIFEDIPINE OXIDASE) (NF-25) (P450-PCN1) - HOMO SAPIENS (HUMAN), 502 aa. [pcls:SWISSPROT-ID:P08684 CYTOCHROME P450 IIIA4 (EC 1.14.14.1) (NIFEDIPINE OXIDASE) (NF-25) (P450-PCN1) - HOMO SAPIENS (HUMAN), 502 aa.
oncogene	oncogene	опсоделе	oxidase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
O	F	O	<b></b>
gap	U	∢	<b>V</b>
ATGGGGCCGGTG TCTCGCCAGGAG G[gap/C]GCAGACC CGGCTCCAGGGC CAGGCC	AGCATTTGAGGAA GCATAACTGACGI C/TJGTGAAGGGG GTGTGGGGTACTT GCC	AGCATCTGCAGAC GACCCCGCAGC ACJTTCCCTCGG ACCCCCTCGAA GCC	CACTGCTGTGCA GGGCAGGGA[A/T] GCTCCAGGCAGA CAGCCCAGCAAA G
627	235	2295	22
cg41972699   627	cg40333812	cg43280482	cg44014837
301	302	303	304

3 (3q26.3)	_		
0	4.60E-246	2.60E-227	1.90E-202
Human Gene SWISSPROT- ID:P07202 THYROID PEROXIDASE PRECURSOR (EC 1.11.1.8) (TPO) - HOMO SAPIENS (HUMAN), 933 aa.	Human Gene SPTREMBL- ID:Q15172 PROTEIN PHOSPHATASE 2A B56-ALPHA - HOMO SAPIENS (HUMAN), 486 aa.	Human Gene SWISSPROT- ID:Q14642 TYPE I INOSITOL-1,4,5- TRISPHOSPHATE 5- PHOSPHATASE (EC 3.1.3.56) (5PTASE) - HOMO SAPIENS (HUMAN), 412 aa. pcls:SPTREMBL- ID:Q14642 INOSITOL 1,4,5- TRIPHOPHATE 5-PHOSPHATASE - HOMO SAPIENS (HUMAN), 412 aa.	Human Gene SWISSPROT- ID:P36876 PROTEIN PHOSPHATASE PP2A, 55 KD REGULATORY SUBUNIT, ALPHA ISOFORM (PROTEIN PHOSPHATASE PP2A B SUBUNIT PHOSPHATASE PP2A B SUBUNIT ALPHA ISOFORM) (ALPHA-PR55) - RATTUS NORVEGICUS (RAT), 447 aa.
peroxidase	phosphatas e	phosphatas e	phosphatas e
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
gap	ပ	<u>ဖ</u>	ڻ ن
⋖	<b> -</b>	∢	O
CAGCACAGCGAG CGCTCTCATTCTG [A/gap]CCTTTTTC CTCTTCTCAGCCA	TCTGTAGAGCTCT GAAAAGGTTGAC[ T/GJATATAGAGGT CTTGTATGTTTTTA	GACAGACGAGAC AGTGAGGTATGTG [A/G]GGCTGCTCC GGAATGGTCCGG AGGC	TAACTATGCAAGA CAAGACTTGGTC[ C/G]TCACGTTCGC GTCTCTAGTTGAT TT
3178	2958	1537	288
cg41626506	cg43918944	cg43988365	cg43969460
305	306	307	308

	T	
2 (2p23)		(1p21)
1.60E-181 2 (2p23)	1.20E-89	5.40E-284 1 (1p21)
phosphatas Human Gene SWISSPROT- ID:P37140 SERINE/THREONINE PROTEIN PHOSPHATASE PP1- BETA CATALYTIC SUBUNIT (EC 3.1.3.16) (PP-1B) - HOMO SAPIENS (HUMAN), RATTUS NORVEGICUS (RAT), MUS MUSCULUS (MOUSE),,	phosphatas Human Gene Similar to SWISSPROT-ID: P39687 POTENT HEAT-STABLE PROTEIN PHOSPHATASE 2A INHIBITOR I1PP2A (HLA-DR ASSOCIATED PROTEIN I) (PHAPI) (ACIDIC NUCLEAR PHOSPHOPROTEIN PP32) (CEREBELLAR LEUCINE RICH ACIDIC NUCLEAR PROTEIN) - HOMO SAPIENS (HUMAN), 249 aa.	Human Gene SWISSPROT- ID:P22001 VOLTAGE-GATED POTASSIUM CHANNEL PROTEIN KV1.3 (HPCN3) (HGK5) (HUKIII) (HLK3) - HOMO SAPIENS (HUMAN), 523 aa.
phosphatas e	phosphatas einhib	potassium_ channel
SILENT- P NONCODI e NG	SILENT- phosp NONCODI einhib NG	SILENT- potassir NONCODI channel NG
ပ	<b>⊢</b>	<b>—</b>
<b>⊢</b>	ပ	<b>o</b>
AATTAAAACTCTA GGTGTATACTTA[T /CJATGGAACTAGT TTATTTCCTATTTA	TGCTCGCGCCGT GCCACTAAGGTCA [C/T]TCCCGCCTC CGAGAGCCCAGA GCCG	CTTTTCCCTCTTA CCCTCTCTCTCT G/TJAACATCGTAA ACAACAGACTTAC GT
		1977
cg43933809 362	cg43931444 215	cg42937321
308	310	311

	r
1 (1p21)	(11q24)
5.40E-284 1 (1p21)	1.80E-205 11 (1.
SILENT- potassium_ Human Gene SWISSPROT- NONCODI channel ID:P22001 VOLTAGE-GATED NG POTASSIUM CHANNEL PROTEIN KV1.3 (HPCN3) (HGK5) (HUKIII) (HLK3) - HOMO SAPIENS (HUMAN), 523 aa.	Human Gene SWISSPROT- ID:P48048 ATP-SENSITIVE INWARD RECTIFIER POTASSIUM CHANNEL, INWARDLY RECTIFYING, SUBFAMILY J, MEMBER 1) (ATP-REGULATED POTASSIUM CHANNEL ROM-K) (KIR1.1) - HOMO SAPIENS (HUMAN), 391 aa.
potassium_ channel	SILENT- potassium_NONCODI channel NG
SILENT- potassiu NONCODI channel NG	SILENT- potassiu NONCODI channel NG
<b>-</b>	ပ
O	<b>4</b>
CCTCTTACCCTCT CTCTCTGAACAT[C MGTAAACAACAG ACTTACGTTAAAC T	CAAAATGTAACAG A TGGCTTTTCAAC[A /GJGGAGTAAAGCA AAGTCTCTAAAGC T
1983	1357
cg42937321	cg40991963
312	313

	(1q25.2)																		
0																			
SILENT- prostaglandi Human Gene SWISSNEW-	ID:P35354 PROSTAGLANDIN G/H	SYNTHASE 2 PRECURSOR (EC	1.14.99.1) (CYCLOOXYGENASE -2)	(COX-2) (PROSTAGLANDIN-	ENDOPEROXIDE SYNTHASE 2)	(PROSTAGLANDIN H2 SYNTHASE	2) (PGH SYNTHASE 2) (PGHS-2)	(PHS II) - HOMO SAPIENS	(HUMAN), 604 aa. pcls: SPTREMBL-	ID:Q16876 PROSTAGLANDIN	ENDOPEROXIDE SYNTHASE-2	PRECURSOR (EC 1.14.99.1)	(PROSTAGLANDIN-	ENDOPEROXIDE SYNTHASE)	(PROSTAGLANDIN SYNTHASE)	(PROSTAGLANDIN G/H	SYNTHASE) - HOMO SAPIENS	(HUMAN), 604 aa.	
prostaglandi	۰																		·
SILENT-	NONCODI n	NG NG																	
A																			
S																			
AAAGATGTTTGAA G	TACTTAAACACT[G	/AJTCACAAGATGG	CAAAATGCTGAAA	တ															
2332																			
cg43951366 2332																			-
314																			

1 (1q25.2)	1 (1p31.2)
0	1.40E-211
prostaglandi Human Gene SWISSNEW- ID:P35354 PROSTAGLANDIN G/H SYNTHASE 2 PRECURSOR (EC 1.14.99.1) (CYCLOOXYGENASE-2) (COX-2) (PROSTAGLANDIN- ENDOPEROXIDE SYNTHASE 2) (PGH SYNTHASE 2) (PGHS-2) (PHS II) - HOMO SAPIENS (HUMAN), 604 aa. pols:SPTREMBL- ID:Q16876 PROSTAGLANDIN ENDOPEROXIDE SYNTHASE-2 PRECURSOR (EC 1.14.99.1) (PROSTAGLANDIN- ENDOPEROXIDE SYNTHASE) (PROSTAGLANDIN SYNTHASE) (PROSTAGLANDIN SYNTHASE) (PROSTAGLANDIN G/H SYNTHASE) - HOMO SAPIENS (HUMAN), 604 aa.	prostaglandi Human Gene SPTREMBL- ID:000325 PROSTAGLANDIN EP3 RECEPTOR SUBTYPE ISOFORM - HOMO SAPIENS (HUMAN), 402 aa.
prostaglandi n	prostaglandi n
SILENT- NONCODI NG	SILENT- NONCODI NG
O	ပ
<u></u>	_
TGGTGGAGCCAC TGCAGTGTTATCT[ T/CJAAAATAAGAA TATTTGTTGAGA TA	CACTTAACTTGCA TGTGCACAGCTT[ T/CJTGGTAACAAA TATCGCTAAACCT TA
5828 829	1431
cg43951366 2829	cg43306254 1431
315 2	316

1 (1p31.2)	(11921)	2 (2q13)
1.40E-211	2.40E-146	2.40E-82
prostaglandi Human Gene SPTREMBL- ID:000325 PROSTAGLANDIN EP3 RECEPTOR SUBTYPE ISOFORM - HOMO SAPIENS (HUMAN), 402 aa.	Human Gene Homologous to SWISSNEW-ID:P09237 MATRILYSIN PRECURSOR (EC 3.4.24.23) (PUMP-1 PROTEASE) (UTERINE METALLOPROTEINASE) (MATRIX METALLOPROTEINASE- 7) (MMP-7) (MATRIN) - HOMO SAPIENS (HUMAN), 267 aa.jpcls:SWISSPROT-ID:P09237 MATRILYSIN PRECURSOR (EC 3.4.24.23) (PUMP-1 PROTEASE) (UTERINE METALLOPROTEINASE- 7) (MMP-7) (MATRIN) - HOMO SAPIENS (HUMAN), 267 aa.	Human Gene Similar to SWISSPROT-ID:P25155 COAGULATION FACTOR X PRECURSOR (EC 3.4.21.6) (STUART FACTOR) (VIRUS ACTIVATING PROTEASE) (VAP) - GALLUS GALLUS (CHICKEN), 475 aa.
prostaglandi n	protease	protease
SILENT- NONCODI n NG	SILENT- NONCODI NG	SILENT- NONCODI NG
<b>-</b>	<b>⊢</b>	O
⋖	O	တ
ATGTGATTAATTA TGTGATGAAAAC[ A/I]TTTTTATAAA TGATCTTGGTCTA T	CAATCAGAATTGA TAAGCACTGTTC[ C/IJTCCACTCCAT TTAGCAATTATGT CA	TCCATCCCTCTTT TGGCCTCTTCTG[ G/CJAGGGAAGTAA CATTTACTGAGCA CC
1666	1064	1703
	cg42918089	cg44032168
317	318	910

11 (11q22)	6 (6pter)	6 (6pter)
2.40E-59	1.60E-124	1.60E-124 6 (6pter)
Human Gene Similar to SWISSPROT-ID:P50280 MATRILYSIN PRECURSOR (EC 3.4.24.23) (PUMP-1 PROTEASE) (UTERINE METALLOPROTEINASE) (MATRIX METALLOPROTEINASE- 7) (MMP-7) (MATRIN) - RATTUS NORVEGICUS (RAT), 267 aa.	Human Gene Homologous to SWISSPROT-ID:P16083 NAD(P)H DEHYDROGENASE (QUINONE) 2 (EC 1.6.99.2) (QUINONE REDUCTASE) (DT-DIAPHORASE) (AZOREDUCTASE) (PHYLLOQUINONE REDUCTASE) (MENADIONE REDUCTASE) - HOMO SAPIENS (HUMAN), 231 aa.	Human Gene Homologous to SWISSPROT-ID:P16083 NAD(P)H DEHYDROGENASE (QUINONE) 2 (EC 1.6.99.2) (QUINONE REDUCTASE) (DT-DIAPHORASE) (AZOREDUCTASE) (PHYLLOQUINONE REDUCTASE) (MENADIONE REDUCTASE) - HOMO SAPIENS (HUMAN), 231 aa.
protease	reductase	reductase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
O	O	ပ
   <b>-</b>	<b>V</b>	дар
TACCCGGAAGTTG AGCTCAATTTCA[T /C]TTCTGTTTTCT GGCCACAACTGC CA	CCCAGTCCTGCG GCTCCTACTGGG G[A/C]GTGCGCTG GTCGGAAGATTG CTGGA	TACTGGGGAGTG CGCTGGTCGGAA Glgap/GJATTGCTG GACTCGCTGAAG AGAGAC
1250	175	191
cg43154190	cg43927549 175	cg43927549
320	321	322

		·	
6 (6pter)		e e	<del>-</del>
1.60E-124   6 (6pter)	3.30E-207	1.70E-200	2.10E-124
Human Gene Homologous to SWISSPROT-ID:P16083 NAD(P)H DEHYDROGENASE (QUINONE) 2 (EC 16.99.2) (QUINONE REDUCTASE) (DT-DIAPHORASE) (AZOREDUCTASE) (PHYLLOQUINONE REDUCTASE) (MENADIONE REDUCTASE) - HOMO SAPIENS (HUMAN), 231 aa.	Human Gene SWISSPROT- ID:015142 ACTIN-LIKE PROTEIN 2 - HOMO SAPIENS (HUMAN), 394 aa.	Human Gene SWISSPROT- ID:Q14012 CALCIUM/CALMODULIN- DEPENDENT PROTEIN KINASE TYPE I (EC 2.7.1.123) (CAM KINASE I) - HOMO SAPIENS (HUMAN), 370 aa.	Human Gene Homologous to SPTREMBL-ID:000379 DELTA- CATENIN - HOMO SAPIENS (HUMAN), 792 aa.
reductase	struct	struct	struct
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
ပ	<u>ග</u>	d e b	ပ
de6	∢	ပ	⋖
CGGTCCGTGGTC CCCGGGGGCGCA G[gap/G]TCGCAGC GCTCCCGCCCTC CAGGCG	TTCTCAAAAGGCT GGGGGTATTTAT[ A/GJTAAGAACTTA TTCCAAAGTGACT CT	AGGAAAGCCGGA GAATTGGGGCAC G[C/gap]AAGAGGG GGGGCTTTGATG ACCCGC	AGATTCATCAGAA A TAGGATTTTTGC[A /CJAAATCCCACCC ATATGCTTTGGG
25	780	113	1926
cg43927549 52	cg43947066	cg43923264	cg43942332
323	324	325	326

12	7 (7q32)	17
4.80E-110 12		1.20E-55
Human Gene Homologous to SPTREMBL-ID:Q28910 MUCIN - BOS TAURUS (BOVINE), 600 aa (fragment).	Human Gene Similar to SWISSNEW- 1D:P12273 PROLACTIN-INDUCIBLE PROTEIN PRECURSOR (SECRETORY ACTIN-BINDING PROTEIN) (SABP) (GROSS CYSTIC DISEASE FLUID PROTEIN 15) (GCDFP-15) (GP17) - HOMO SAPIENS (HUMAN), 146 aa. pcls:SWISSPROT-ID:P12273 PROLACTIN-INDUCIBLE PROTEIN PRECURSOR (SECRETORY ACTIN-BINDING PROTEIN) (SABP) (GROSS CYSTIC DISEASE FLUID PROTEIN 15) (GCDFP-15) - HOMO SAPIENS (HUMAN), 146 aa.	Human Gene Similar to SWISSPROT-ID:P19065 SYNAPTOBREVIN 2 (VESICLE ASSOCIATED MEMBRANE PROTEIN 2) (VAMP-2) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 115 aa.
struct	struct	struct
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
<b>-</b>	<b>F</b>	<b>-</b>
ပ	O	<b>4</b>
CCGCTGTCTCTGT G CTTCGCTTTTTA[G //ITCAAGAAGAAT AATGCGACGAAAA	CCACTTCTCTGGG ACACATTGCCTT[C MJTGTTTTCTCCA GCATGCGCTTGCT C	CATCATCATA GTTTACTTCAGC[A MJCTTAAATCCCC GAGGAGTCTGCC CT
280	146	546
cg43274705 580	cg42207316	cg43927885
327	328	329

12 (12q24.2 )		
	9.80E-269 8	)E-83
0	6 6 8.6	9.20
Human Gene SWISSPROT- ID:P29475 NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I) (NEURONAL NOS) (NNOS) - HOMO SAPIENS (HUMAN), 1434 aa.	Human Gene SWISSPROT- ID:P48651 PHOSPHATIDYLSERINE SYNTHASE I (SERINE-EXCHANGE ENZYME I) (EC 2.7.8) (KIAA0024) - HOMO SAPIENS (HUMAN), 473 aa.	Human Gene Similar to SPTREMBL- 9.20E-83 ID:Q42761 SQUALENE SYNTHASE (EC 2.5.1.21) (FARNESYL- DIPHOSPHATE FARNESYLTRANSFERASE) (FARNESYLTRANSFERASE) (FRESQUALENE-DI- DIPHOSPHOSPHATE SYNTHASE) - GLYCYRRHIZA GLABRA, 412 aa.
synthase	synthase	synthase
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
<u> </u>	<b>⊢</b>	O
deb	O	<b> -</b>
CTCTTGCCCAGCC gap GGCTGCAAGTTT gap/TJGTAAGCGC GGGACAGACACT GCTGA	AGGTTACCAAACA GGAATACAACAC[ C/TJTCTCTCCCTT TTCTGCTCTAGAA GG	TGGGTGATGATCA CTGTGCTGCTTG[ T/C]GGCTCATGGC AGAGCATTCAGTG CC
5029	555	1565
cg40388639 5029	cg43949316	cg43958714
330	331	332

1 (1923)	1 (1923 <u>)</u>
3.20E-65 1 (1q23)	3.20E-65
Human Gene Similar to SWISSPROT-ID:P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. Ipcls:SPTREMBL-ID:P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.	Human Gene Similar to SWISSPROT-ID:P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. Ipols:SPTREMBL-ID:P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.
synthase	synthase
SILENT- NONCODI NG	SILENT- NONCODI NG
	·
<u>.                                    </u>	O .
ACAGACTGGCTG CAGCATTAGGAAT [C/TJAGGTCATTCC GAAACTCATCATT GA	GGTCATTCCGAAA T CTCATCATTGAA[T /C]CAGGAAGAAGA AGAGTTCAATCTT A
2508	2535
cg43275028 2508	cg43275028 2535
	334

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1 (1923)	1 (1923)
3.20E-65	3.20E-65
Human Gene Similar to SWISSPROT-ID:P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. Ipcls:SPTREMBL-ID:P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.	Human Gene Similar to SWISSPROT-ID: P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. Ipcls: SPTREMBL-ID: P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.
synthase	synthase
SILENT- NONCODI NG	SILENT- NONCODI NG
0	O
AGAATGGCACTGA A ATTCGTTTCTV GJAACACAGATAT AATTGTTGGTTCA A	CTTTCACTTGGTG A CTGGAGAATTCA[ A/GJAAGTCAAGAA CATGCTAAGCATA AG
2601	2873
cg43275028 2601	cg43275028
335	336

1 (1923)	1 (1923)
3.20E-65 1 (1qz3)	3.20E-65
Human Gene Similar to SWISSPROT-ID:P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. pcls:SPTREMBL-ID:P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.	Human Gene Similar to SWISSPROT-ID:P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. [pcls:SPTREMBL-ID:P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.
synthase	synthase
SILENT- NONCODI NG	SILENT- NONCODI NG
O	<u> </u>
∢	<b>V</b>
TTCAAAAGTCAAG A AACATGCTAAGCI AAGJTAAGGGACCC AAGGTAGAAAGA GAT	TTCTCCTTCCAGA ATGAGGCCCTGG AGJAGGACCCTCC TAGTGATCTGTTA CT
2894	3073
cg43275028 2894	cg43275028
337	338

1 (1923)	4	17	1 (1p31.2)
3.20E-65	1.60E-236	2.00E-220	4.80E-212
Human Gene Similar to SWISSPROT-ID:P70490 MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (O- ACETYL GD3 GANGLIOSIDE SYNTHASE) (AGS) (MFGM) - RATTUS NORVEGICUS (RAT), 427 aa. jpcls:SPTREMBL-ID:P70490 O- ACETYL GD3 GANGLIOSIDE SYNTHASE - RATTUS NORVEGICUS (RAT), 427 aa.	Human Gene SWISSPROT- ID:P25101 ENDOTHELIN-1 RECEPTOR PRECURSOR (ET-A) - HOMO SAPIENS (HUMAN), 427 aa.	Human Gene SWISSPROT- ID:P51575 P2X PURINOCEPTOR 1 (ATP RECEPTOR) (P2X1) (PURINERGIC RECEPTOR) - HOMO SAPIENS (HUMAN), 399 aa.	Human Gene SWISSPROT. ID:P43115 PROSTAGLANDIN E2 RECEPTOR, EP3 SUBTYPE (PROSTANOID EP3 RECEPTOR) (PGE RECEPTOR, EP3 SUBTYPE) -
synthase	tm7	tm7	tm7
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
O	<u>ဖ</u>	ပ	<b>0</b>
4	ပ	U	<u></u>
ACTACATAAGGAC AGCAACATGCCT[ AGJTGGACATGAG AGAATTTGTCTTA CT	GAAAAAATCACA AGGCAACTGTGA[ C/GJTCCGGGAATC TCTTCTCTGATCC	TCCGACCCCACA CACCCTGAGGGA G[C/G]CCTACCCT AGCCTCAGCCGC	ATAATCCATGCCT CTGAATATTAGA[T /G]TGGTTTCTTGG ATGGGATTTTGAA T
2590	1856	1684	1603
cg43275028	cg43985000	cg39565524	cg43306266
339	340	341	342

1 (1p31.2)		-	(1p31.2)				
4.80E-212 1 (1p31.2)		4.80E-212 1					
Human Gene SWISSPROT- ID:P43115 PROSTAGLANDIN E2	RECEPTOR, EP3 SUBTYPE (PROSTANOID EP3 RECEPTOR) (PGE RECEPTOR, EP3 SUBTYPE) - HOMO SAPIENS (HUMAN), 390 aa.	Human Gene SWISSPROT-	ID:P43115 PROSTAGLANDIN E2	RECEPTOR, EP3 SUBTYPE	(PROSTANOID EP3 RECEPTOR)	(PGE RECEPTOR, EP3 SUBTYPE) -	HOMO SAPIENS (HUMAN), 390 aa.
tm7		tm7					
SILENT- tm7 NONCODI	9 N	SILENT- tm7	NONCODI	S S			
	··· · · · · · · · · · · · · · · · · ·						
ပ		၁					
gap		9					
GGGATTTTGAATA gap	ap/CjGTTGGGAAG AATTTCACAGATG ATG	GAATATGCATTTA G	AGAAGTTGGGAA[	G/CJAATTTCACAG	ATGATGATTGGAG	GA	
		1650					
cg43306266 1641		cg43306266 1650					
343		344					

8.20E-201	2.00E-197 x
Human Gene SWISSNEW- ID:Q99527 CHEMOKINE RECEPTOR-LIKE 2 (IL8-RELATED RECEPTOR DRY12) (FLOW- INDUCED ENDOTHELIAL G PROTEIN-COUPLED RECEPTOR) (FEG-1) (G PROTEIN-COUPLED RECEPTOR GPR30) (GPCR-BR)- HOMO SAPIENS (HUMAN), 375 aa. pcis:SWISSPROT-ID:Q99527 CHEMOKINE RECEPTOR-LIKE 2 (IL8-RELATED RECEPTOR-LIKE 2 (IL8-RELATED RECEPTOR DRY12) (FLOW-INDUCED ENDOTHELIAL G PROTEIN-COUPLED RECEPTOR GPR30) - HOMO SAPIENS (HUMAN), 375 aa. pcis:TREMBLNEW-ID:G2656121 G-PROTEIN COUPLED RECEPTOR - HOMO SAPIENS (HUMAN), 375 aa.	Human Gene SWISSPROT- ID:P50052 TYPE-2 ANGIOTENSIN II RECEPTOR (AT2) - HOMO SAPIENS (HUMAN), 363 aa.
tm7	tm7
SILENT- NONCODI NG	SILENT- NONCODI NG
<b></b>	o ပ
ပ	дар
TCGGCAAATCTTG C AAAGCTGCAGGG[ C/TJGCAGAGACAT GGATGTGACTTCC CA CA	AAGGCATAAGAAC gap TAGGAGCTGCTG[ gap/GJACATTTCAA TATGAAGGGCAAC
683	439
cg43329467 683	cg2751286
345	346

3.20E-176 1	1.10E-173 1	1.10E-173 1	6.90E-109 3.
Human Gene SWISSPROT- ID:P46089 PROBABLE G PROTEIN- COUPLED RECEPTOR GPR3 (ACCA ORPHAN RECEPTOR) - HOMO SAPIENS (HUMAN), 330 aa.	Human Gene SWISSPROT- ID:P30542 ADENOSINE A1 RECEPTOR - HOMO SAPIENS (HUMAN), 326 aa.	Human Gene SWISSPROT- ID:P30542 ADENOSINE A1 RECEPTOR - HOMO SAPIENS (HUMAN), 326 aa.	Human Gene Homologous to SWISSPROT-ID:P31421 METABOTROPIC GLUTAMATE RECEPTOR 2 PRECURSOR - RATTUS NORVEGICUS (RAT), 872 aa.
tm7	tm7	tm7	tm7
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
			·
<u> </u>	<u> </u>	O	O
O	O	ပ	⋖
GAATGTGGGGAT C AAGGCATTGGGA C[C/T]CTATCAGGT ATCCTGAGGAGA GACT	CAGCCGGGAGCT CTGCCAGCTTTGG [C/T]GAAGGAGGG TGCTTGCCTCGTG	CGGGAGCTCTGC CAGCTTTGGCGAA [G/C]GAGGGTGCT TGCCTCGTGCCC CTTG	TGCTCTTGCTGCT GATGGAGGAGGA[ A/G]GGGGTGGAT CCCGTGGAGCCT CCAA
76	135	139	1839
cg11751407 76	cg43326635	cg43326635	cg43993798
347	348	349	350

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2.90E-74	2.90E-74
Human Gene Similar to SWISSPROT-ID:25322 TYRAMINE/OCTOPAMINE RECEPTOR 2 (TYR-LOC 2) - LOCUSTA MIGRATORIA (MIGRATORY LOCUST), 484 aa. [pcls:SPTREMBL-ID:Q25322 GCR2 (G PROTEIN-COUPLED RECEPTOR) - LOCUSTA MIGRATORIA (MIGRATORY LOCUST), 484 aa.	Human Gene Similar to SWISSPROT-ID:Q25322 TYRAMINE/OCTOPAMINE RECEPTOR 2 (TYR-LOC 2) - LOCUSTA MIGRATORIA (MIGRATORY LOCUST), 484 aa. pcls:SPTREMBL-ID:Q25322 GCR2 (G PROTEIN-COUPLED RECEPTOR) - LOCUSTA MIGRATORIA (MIGRATORY LOCUST), 484 aa.
SILENT- tm7 NONCODI NG	SILENT- tm7 NONCODI NG
U	<b>⊢</b>
ATGCTTCCCCCAA A CCTAGGGAATCI ACJACACTTAAGA TAATTCGCCACTT CT	CCAACCCTAGGG G AATCAACACTTAA[ G/IJATAATTCGCC ACTTCTCCTCTTT CT
2130	2139
cg43040271 2130	cg43040271
351	352

	5 (5q32)	5 (	5 (5q32)
2.90E-74	2.00E-58	2.00E-58	2.00E-58
Human Gene Similar to SWISSPROT-ID:Q25322 TYRAMINE/OCTOPAMINE RECEPTOR 2 (TYR-LOC 2) - LOCUSTA MIGRATORIA (MIGRATORY LOCUST), 484 aa. pcls:SPTREMBL-ID:Q25322 GCR2 (G PROTEIN-COUPLED RECEPTOR) - LOCUSTA MIGRATORIA (MIGRATORY LOCUST), 484 aa.	Human Gene Similar to SWISSPROT-ID:Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	Human Gene Similar to SWISSPROT-ID: Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	Human Gene Similar to SWISSPROT-ID: Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.
tm7	tm7	tm7	tm7
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG
F	O	<u>ග</u>	ပ
O	<del>L</del>	∢	U
AGATAATTCGCCA CTTCTCCTCTTTC MJTCTCTGCTCCG CTCACGGCTTGCA G	CGCAGAGCCCCG CCGTGGGTCCGC C[T/C]GCTGAGGC GCCCCAGCCAG	CAGCGCCTTCTTG CTGGCACCCAAT[ A/G]GAAGCCATGC GCCGGACCACGA GCCGGACCACGA	TGCGCCGGACCA CGACGTCACGCA G[C/G]AAAGGGAC GAGGTGTGGGTG GTGGG
2163	1668	1760	1793
cg43040271   2163	cg43040273	cg43040273	cg43040273
353	354	355	356

5 (5q32)	5 (5q32)	5 (5q32)	12	12
2.00E-58	2.00E-58	2.00E-58	1.70E-177	1.70E-177
Human Gene Similar to SWISSPROT-ID: Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	Human Gene Similar to SWISSPROT-ID:Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	Human Gene Similar to SWISSPROT-ID:Q24563 DOPAMINE RECEPTOR 2 - DROSOPHILA MELANOGASTER (FRUIT FLY), 539 aa.	transcriptfac Human Gene SPTREMBL- ID:Q07279 TRANSCRIPTION FACTOR NF-E2 - MUS MUSCULUS (MOUSE), 373 aa.	transcriptfac Human Gene SPTREMBL- ID:Q07279 TRANSCRIPTION FACTOR NF-E2 - MUS MUSCULUS (MOUSE), 373 aa.
tm7	tm7	tm7	transcriptfac tor	transcriptfac tor
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- tra NONCODI tor NG	SILENT- tra NONCODI tor NG
O	∢	∢	F	O
ပ	ڻ ن	дар	gap	ပ
GCAGGTCTTCTTT GAAGGCCTATGG G/CJAATGGCTACT CCAGCAACGGCA ACA	ATTGTAGTACAAA TGACTCACTGCT[ G/AJTAAAGCAGTT TTCTACTTTTAAA G	ATAAACTTAGAAT AAAATTGTAAAAlg ap/AJTTGTATAGAG ATATGCAGAAGGA AG	AGGGGTGGAACT GCTGATGGGATTT [gap/T]CCTTCATTC CCTTCTGATAAAG GTA	AGCCTCCCCAGA GACAACACCGGG A[G/C]CCTCATCTC TCTCCTCACCTG CTG
2767	2953	3053	1501	249
cg43040273 2767	cg43040273	cg43040273	cg43998970	cg43998970
357	358	359	360	361

8		5 (5p15.3)	1
4.20E-158	6.90E-68	0	0
transcriptfac Human Gene SWISSNEW- ID:P23193 TRANSCRIPTION ELONGATION FACTOR S-II (TRANSCRIPTION ELONGATION FACTOR A) - HOMO SAPIENS (HUMAN), 301 aa. pcls:SWISSPROT-ID:P23193 TRANSCRIPTION ELONGATION FACTOR S-II (TRANSCRIPTION ELONGATION FACTOR A) - HOMO SAPIENS (HUMAN), 301 aa.	transcriptfac Human Gene Similar to tor TREMBLNEW-ID:G2920821 TRANSCRIPTION FACTOR T-BOX 5 - HOMO SAPIENS (HUMAN), 518 aa.	Human Gene SWISSPROT- ID:Q01959 SODIUM-DEPENDENT DOPAMINE TRANSPORTER (DA TRANSPORTER) (DAT) - HOMO SAPIENS (HUMAN), 620 aa.	Human Gene SWISSPROT- ACC:P02545 LAMIN A (70 KD LAMIN) - Homo sapiens (Human), 664 aa.
transcriptfac tor	transcriptfac tor	transport	UNCLASSI FIED
SILENT- tran	SILENT- tra NONCODI tor NG	SILENT- NONCODI NG	SILENT- UNC NONCODI FIED NG
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	<u>.</u>		
<u> </u>	O	O	∢
O	⋖	<b>-</b>	gap
GTCTTCTCCGCGC CCACCCGCTGGI C/TJAAGGGGGAAGT GGGCGAAGCTGG AGC	GGGGCCGGGCAC TGCCCAGGAAGG G[A/G]CTCCGGGA GAGGGAGCCGGC	AGACGAAGACCC CAGGAAGTCATCC [T/C]GCAATGGGA GAGACACGAACA AACC	CCCACGCCTGCC AGGAGCAAGCCG A[gap/A]GAGCCAG CCGGCCGGCGCA CTCCGA
2623	934	2030	237
cg43947199	cg43917396	cg40351913	cg43921289
362	363	364	365

16	16	91		17 (17q11)
0	0	0	0	0
Human Gene SWISSPROT- ACC:Q14687 HYPOTHETICAL PROTEIN KIAA0182 - Homo sapiens (Human), 1157 aa (fragment).	Human Gene SPTREMBL- ACC:Q16084 P130 - HOMO SAPIENS (HUMAN), 1139 aa.	Human Gene SPTREMBL- ACC:Q16084 P130 - HOMO SAPIENS (HUMAN), 1139 aa.	Human Gene SWISSPROT- ACC:P42566 EPIDERMAL GROWTH FACTOR RECEPTOR SUBSTRATE SUBSTRATE 15 (PROTEIN EPS15) (AF-1P PROTEIN) - Homo sapiens (Human), 896 aa.	Human Gene SWISSPROT- ACC:P53675 CLATHRIN HEAVY CHAIN 2 (CLH-22) - Homo sapiens (Human), 1640 aa.
LASSI	LASSI	LASSI	UNCLASSI FIED	UNCLASSI
SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- NONCODI FIED NG	SILENT- NONCODI NG	SILENT- NONCODI NG
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⋖	O			4
AAACAAATAAGCC CTTTTACTGACIA /GJATGCACCCAAC CTTTTCAGCTGAA G	AGAGTCAAAAATC CAAGTTTGGATT[C /GJTAAGCAGCCTT GACAGTAATCACT G	AAGCAGCCTTGAC A AGTAATCACTGA[A /GJTGGTAGGGAAA AAAAGACAGTTGG G	AGGCAAAAGCTCA A CAGTAAATGTATĮA /CJCCAGAACAGG GGCCTAAGTGAA GGT	CTGCTCCCANCTT A CGCCAGCCTCCA AGITGTACAACTT CCGCGTGTAGTG GGC
3196	1309	1336	2206	4893
cg43928515	cg43955093	cg43955093	cg43925474	cg44014437
366	367	368	369	370

17 (17q11)	20 (20pter)	21 (21q22.1 )	222 (22q13.1 )
0	0	0	
Human Gene SWISSPROT- ACC:P53675 CLATHRIN HEAVY CHAIN 2 (CLH-22) - Homo sapiens (Human), 1640 aa.	Human Gene SWISSPROT. ACC:P05060 SECRETOGRANIN I PRECURSOR (SGI) (CHROMOGRANIN B) - Homo sapiens (Human), 677 aa.	Human Gene SWISSNEW- ACC:Q13009 T-LYMPHOMA INVASION AND METASTASIS INDUCING PROTEIN 1 (TIAM1 PROTEIN) - Homo sapiens (Human), 1591 aa.	Human Gene SWISSPROT.  ACC:P13866 SODIUM/GLUCOSE COTRANSPORTER 1 (NA(+)/GLUCOSE COTRANSPORTER 1) (HIGH AFFINITY SODIUM-GLUCOSE COTRANSPORTER) - Homo sapiens (Human), 664 aa.
UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI FIED
SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- NONCODI NG
<u> </u>	<	 	<u></u>
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CTGCTCCCAACTT CGCCAGCCTCCA[ A/GJTGTACAACTT CCGCGTGTAGTG GGC	CACTTCACTGAAA GACACCATTTAT[C /A]TACCCAAGGGC AGAAAGTAGAACT T	GATAGGACTCAAG CTTATTTGGGAT[C /T]CTGATCAATTC TTCTGATGTTGT T	TACAGCCATCTGT ACCTACTGGAGC[ C/TJGCAGAAGGG AAGTCCACTCAGT CAC
5114	2242	1939	2416
cg44014448   5114	cg43973129	cg43950657	cg43956384
371	372	373	374

	T			
X (Xp22.3)			10	7
0	0	0	1.60E-292	1.20E-280
Human Gene SWISSPROT- ACC:P23352 KALLMANN SYNDROME PROTEIN PRECURSOR (ADHESION MOLECULE-LIKE X-LINKED) - Homo sapiens (Human), 680 aa.	Human Gene TREMBLNEW- ACC:AAD23581 CULLIN 2 - HOMO SAPIENS (HUMAN), 745 aa.	Human Gene TREMBLNEW- ACC:AAD23581 CULLIN 2 - HOMO SAPIENS (HUMAN), 745 aa.	Human Gene TREMBLNEW- ACC:CAA08974 GUANINE NUCLEOTIDE-EXCHANGE FACTOR - HOMO SAPIENS (HUMAN), 548 aa.	Human Gene SWISSPROT- ACC:P38567 HYALURONIDASE PRECURSOR (EC 3.2.1.35) (SPERM SURFACE PROTEIN PH- 20) (SPERM ADHESION MOLECULE 1) - Homo sapiens (Human), 509 aa.
UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI	UNCLASSI
SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG
-10				
A	<u> </u>	<b> -</b>	<b>-</b>	∢
<u>o</u>	<u> </u>	∢	∢	<b></b>
AGCAGTGCAGCC CCGGCGCGGAGC A[G/A]GGAGCCTC GGCCCGCGCCCG	GAGAAAAGCATG A GTACCCAACCGA[ ATJTTCCACTTT CAGCAATACTTCA	TAAAGTTTTAAGA AATGTCATAATGIA //JCATGAGCTTGA AATATCTCTAGGC	AGCAAAGAAACAC A TGGCAGAATTCC[ ATJGCATTTGCAA AATTCTAAGTTTT GG	AAATAAATGTTTT CATAGTCATTACIT AJCTTTACAATGG GAGTGCTAAAATT C
101	260	323	1121	366
cg43992229	cg44932392	cg44932392	cg43981656	cg44910613
375	376	377	378	379

5			
(Xp22.1)	_	2	
4.70E-261 X	2.10E-258	7.00E-251	4.80E-213
Human Gene SWISSPROT- ACC:P37287 N- ACETYLGLUCOSAMINYL- PHOSPHATIDYLINOSITOL BIOSYNTHETIC PROTEIN (GLCNAC-PI SYNTHESIS PROTEIN) (PHOSPHATIDYLINOSITOL GLYCAN COMPLEMENTATION CLASS A) (PIG-A) - Homo sapiens (Human), 484 aa.	Human Gene SPTREMBL- ACC:P78506 DIABETES MELLITUS TYPE I AUTOANTIGEN (ISLET CELL AUTOANTIGEN P69) - HOMO SAPIENS (HUMAN), 483 aa.	Human Gene SWISSPROT- ACC:P11926 ORNITHINE DECARBOXYLASE (EC 4.1.1.17) (ODC) - Homo sapiens (Human), 461 aa.	Human Gene SWISSPROT- ACC:P32754 4- HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD) (HPD) - Homo sapiens (Human), 392 aa.
ASSI	LASSI	UNCLASSI FIED	UNCLASSI FIED
SILENT- UNCI NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG
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F	9	U	∢
AACTGGGTTGCTC TAAGAACTGATGT /CJCTAAACCGTCT CAGCATGGCCTG TA	CAATGCATGAATC TGTACCCTTCGG[ G/gapJAGGGGCACT CACATGCCGCCC CCAGC	TTGTTCATGATTT CTTGATGTTCCT[C /gap]TAATGGAAAA CTAAGAGATGGAA	GCCGAGTCCGCT GGTGGGCGGACC C[A/T]AGGGGGAGC AGCCAGTAGGGA AGTTG
189	1643	1961	129
	cg43929959	cg43950250	cg43064090
380	381	382	383

			(4q21.2)	5
4.80E-213	4.80E-213	4.80E-213	1.20E-177	4.20E-166
Human Gene SWISSPROT- ACC:P32754 4- HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD) (HPD) - Homo sapiens (Human), 392 aa.	Human Gene SWISSPROT. ACC:P32754 4- HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD) (HPD) - Homo sapiens (Human), 392 aa.	Human Gene SWISSPROT- ACC:P32754 4- HYDROXYPHENYLPYRUVATE DIOXYGENASE (EC 1.13.11.27) (4HPPD) (HPD) - Homo sapiens (Human), 392 aa.	Human Gene SWISSPROT- ACC:P30968 GONADOTROPIN- RELEASING HORMONE RECEPTOR (GNRH-R) - Homo sapiens (Human), 328 aa.	Human Gene SWISSNEW- ACC:Q16637 SURVIVAL MOTOR NEURON PROTEIN 1 - Homo sapiens (Human), 294 aa.
UNCLASSI	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	LASSI
SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNCI NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG
<u> </u>	ပ	ပ	O	gap
4	U	O	⋖	<u></u>
CCGAGTCCGCTG GTGGCCGGACCC A[A/T]GGGGAGCA GCCAGTAGGGAA GTTGG	GGGAGCAGCCAG TAGGGAAGTTGG G[C/G]GAGTTCCA GAATCAGGGGGC GTGGC	TAATCGGGAGGG CTGGAGCAGAGG G[C/G]GGCCCCGC CGAGGGGCGTGG TCAGT	GATGCCAAAAAAA CAAAGGTGAGAA[ A/C]CCACAACACA GGTCTAAACTCAG CA	GTCTTTTACAGAT GGTTTTTCAAAA[T /gap]AGAGTCCAG TAAAATATTTCAC ATT
130	157	61	3296	381
cg43064090 130		cg43064090	cg30490224	cg43924431
384	385	386	387	388

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13	1 (1p22)			
4.30E-164	7.70E-158	4.90E-156 2	1.10E-150 6	1.90E-138 7
Human Gene TREMBLNEW- ACC:AAD40550 P38IP - HOMO SAPIENS (HUMAN), 733 aa.	Human Gene SWISSNEW- ACC:P13726 TISSUE FACTOR PRECURSOR (TF) (COAGULATION FACTOR III) (THROMBOPLASTIN) (CD142 ANTIGEN) - Homo sapiens (Human), 295 aa.	Human Gene SPTREMBL- ACC:Q92600 PROTEIN INVOLVED IN SEXUAL DEVELOPMENT, COMPLETE CDS - HOMO SAPIENS (HUMAN), 299 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAC69899 SACM21 - MUS MUSCULUS (MOUSE), 721 aa.	Human Gene Homologous to TREMBLNEW-ACC:AAD23440 LR8 - HOMO SAPIENS (HUMAN), 270 aa.
UNCLASSI FIED	UNCLASSI	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED
SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG
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CGTTGTTCCTAAT GTGGATCTACCA C/TCCCTGTGTTC ATCGAGATTCCGG TC	TGGGATTACAGGT GCGCACTACCAC[ A/G]CCAAGCTAAT TTTGTATTTTTA G	CCTTCAGCACCCC TGCAGCGGAAAAI C/TJAATGAGCCGC CGTAGCCGCCAT CCG	AAAAGCTACAGA AAAGAAATCACT[T /C]TGAAAAACACA ATGACTCAGAGG CA	CAGGGACATGCG GGCACCCCGTGG G[G/gap]TCTTTGG CGCCTCACAGGA
209	1542	2065	176	418
cg43936047	cg43272443	cg43966848	cg43964140	cg43285114
688	390	391	392	393

		F
		9
3.30E-125   11	2.70E-123	6.90E-118
UNCLASSI Human Gene Hc nologous to SWISSNEW-AC ::P18582 CD81 ANTIGEN (26 KI CELL SURFACE PROTEIN TAPA 1) - Homo sapiens (Human), 236 a:	Human Gene Hi mologous to SPTREMBL-AC ::Q15025 MRNA (HA1652) FOR NRF, PARTIAL CDS - HOMO SAPIE IS (HUMAN), 296 aa (fragment).	Human Gene Homologous to SWISSPROT-4 CC:P22061 PROTEIN-L-IS JASPARTATE(D-ASPARTATE) METHYLTRAN SERASE (EC 2.1.1.77) (PRO EIN-BETA-ASPARTATE METHYLTRANSFERASE) (PIMT) (PROTEIN L-ISOASPARTYL/D-ASPARTYL METHYLTRANSFERASE) (L-ISOASPARTYL PROTEIN CARBOXYL METHYLTRANSFERASE) - Homo sapiens (Human), 226 aa.
Human SWISSI ANTIGE PROTE (Human	Human Ger SPTREMBI (HA1652) F - HOMO SA (fragment).	Human Gene Swissprot-Swissprot-IS ASPARTATE) METHYLTRAN 2.1.1.77) (PRC ASPARTATE METHYLTRAN (PROTEIN L-IS ASPARTYL METHYLTRAN ISOASPARTY CARBOXYL METHYLTRAN ISOASPARTY CARBOXYL METHYLTRAN Sapiens (Hums sapiens (Hums PROTEIN L-IS ASPARTY CARBOXYL METHYLTRAN Sapiens (Hums
UNCLASSI	UNCLASSI	UNCLASSI
SILENT- UNCI NONCODI FIED NG	SILENT- UNCI NONCODI FIED NG	SILENT- UNCI NONCODI FIED NG
gap	<u>ن</u>	Ą
	⋖	⊢
GCAGGCAGAGCA CCCTGGGACCCC A[G/gap]GGCAGAA GGACCCCTGCCC	TAAACAGCTCAGT TCAGGGACTGGT[ A/G]TACAAGCTGG CCACCCATCTCAG CC	TTACAGGACATCA CCTGCCATCTTA[T /A]GGTTTAATATTT ACAAATGCCTAGT
370	649	259
cg43948566	cg44003626	cg43917206
394	395	396

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	12	12	
2.50E-111 8	2.90E-110	2.90E-110	1.20E-106 22 (2.2)
Human Gene Homologous to SPTREMBL-ACC:000559 CANCER ASSOCIATED SURFACE ANTIGEN - HOMO SAPIENS (HUMAN), 213 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SPTREMBL-ACC:P97314 DOUBLE LIM PROTEIN-1 - MUS MUSCULUS (MOUSE), 193 aa.	Human Gene Homologous to SWISSPROT-ACC:P15018 LEUKEMIA INHIBITORY FACTOR PRECURSOR (LIF) (DIFFERENTIATION- STIMULATING FACTOR) (D FACTOR) (MELANOMA-DERIVED LPL INHIBITOR) (MLPLI) - Homo sapiens (Human), 202 aa.
UNCLASSI FIED	ASSI	UNCLASSI FIED	UNCLASSI
SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- NONCODI NG
<b>-</b>	<u> </u>	<b>L</b>	<u> </u>
O	ပ	ပ	∢
GGCCGATTTTCC C ACAATTTAAATC[C /T]CAGTTCACCTG GTATCCAGCTCCA G	GTTTCCACCTCCC C CAGACAGGCATT[ C/T]CGAGTGGGA GGCGGGAGCACG TACC	TTTCCACCTCCCC AGACAGGCATTCI C/TJGAGTGGGAG GCGGGAGCACGT ACCG	CTAAACCCAAATG A GGGGCTGCTGGC[ A/TJGACCCCGAG GGTGCCTGGCCA GTCC
215	840	841	1030
cg43289666	cg43986282	cg43986282	cg43297716
397	398	399	400

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8 (8q22)			
7.90E-101 8 (8q22)	1.00E-100	1.60E-100	1.60E-100
Human Gene Homologous to SWISSPROT-ACC:P34741 SYNDECAN-2 PRECURSOR (FIBROGLYCAN) (HEPARAN SULFATE PROTEOGLYCAN CORE PROTEIN) (HSPG) (SYND2) - Homo sapiens (Human), 201 aa.	Human Gene Similar to SPTREMBL-ACC:043399 HD54+INS2 ISOFORM - HOMO SAPIENS (HUMAN), 206 aa.	Human Gene Similar to SWISSNEW- 1.60E-100 ACC:P11686 PULMONARY SURFACTANT-ASSOCIATED PROTEIN C PRECURSOR (SP-C) (SP5) (PULMONARY SURFACTANT-ASSOCIATED PROTEOLIPID SPL(VAL)) - Homo sapiens (Human), 197 aa.	Human Gene Similar to SWISSNEW-ACC:P11686 PULMONARY SURFACTANT-ASSOCIATED PROTEIN C PRECURSOR (SP-C) (SP5) (PULMONARY SURFACTANT-ASSOCIATED PROTEOLIPID SPL(VAL)) - Homo sapiens (Human), 197 aa.
UNCLASSI	UNCLASSI FIED	UNCLASSI	UNCLASSI FIED
SILENT- NONCODI FIED NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- UNC NONCODI FIED NG
<u> </u>	<b>-</b>	deb	ග
O	O	O	<b>4</b>
TTTTATCATTAAAG TGCCAGAATGG[C/ TJTCTTTAATGAAA ACAAAAAACAAAG	GGAGGGTTGGAG TCACTGACGAATG [C/T]GAGCCGGGC CAGGCCCATGCA AAGG	GCCACCTGCCCG GGCTGTGGAGGA G[C/gap]GCTCGCG CTGACCAGGCGC TGGGGC	GCTTCTGCCCACA A CCGCAGGGGACAQ A/GJCCCTGGAGAA ATGGGAGCNTGGGAGCNTGGGAG
2160	624	881	1124
cg43980312   2160	cg43939240	cg43941552	cg43941552
401	402	403	404

Ž	55	9	10	10
2.10E-100   12	5.30E-95	3.40E-93	3.40E-93	3.40E-93
Human Gene Similar to SWISSPROT-ACC:P45973 HETEROCHROMATIN PROTEIN 1 HOMOLOG ALPHA (HP1 ALPHA) (ANTIGEN P25) - Homo sapiens (Human), 191 aa.	Human Gene Similar to SWISSPROT-ACC:P30536 PERIPHERAL-TYPE BENZODIAZEPINE RECEPTOR (PBR) (PKBS) (MITOCHONDRIAL BENZODIAZEPINE RECEPTOR) - Homo sapiens (Human), 169 aa.	Human Gene Similar to SWISSPROT-ACC:P36405 ADP- RIBOSYLATION FACTOR-LIKE PROTEIN 3 - Homo sapiens (Human), 182 aa.	Human Gene Similar to SWISSPROT-ACC:P36405 ADP- SRIBOSYLATION FACTOR-LIKE PROTEIN 3 - Homo sapiens (Human), 182 aa.	Human Gene Similar to SWISSPROT-ACC:P36405 ADP- RIBOSYLATION FACTOR-LIKE PROTEIN 3 - Homo sapiens (Human), 182 aa.
UNCLASSI   FIED	ASSI	UNCLASSI FIED	UNCLASSI	UNCLASSI
SILENT- NONCODI NG	SILENT. UNCI NONCODI FIED NG	SILENT- UNC NONCODI FIED NG	SILENT- NONCODI NG	SILENT- UNCI NONCODI FIED NG
<u> </u>	<b> -</b>	4	O	-
	o	O	⋖	U
CATTTCTCTTTGT C ACATAATACATT[C MJACCTCCCTGCC TCCTCTTTCT A	CAGGGGTCAGCA GAGCTTCAGAGG TIGATGCCCCACC TGAGCCCCACC	CAGAAAGCAGCA AATTAGTGTTTT[ C/AJAGGACCGAAT TCGGCTCCCGCA	GCT  AAGCAGCAAATTA GTGTTTTCAGG(A /CJCCGAATTCGGC TCCCGCAGCTCCT	G CTCCCGCAGCTC CTGCATCTCCATT CATGTCTAGATT TATTTCTTCTTTGC A
914	878	507	511	547
cg42917153   9	cg43927693 E	cg43951338	cg43951338	cg43951338
405	406	407	408	409

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.20E-91	7.20E-91	7.20E-91	7.20E-91
	Human Gene Similar to SWISSNEW- 7 ACC:P01185 VASOPRESSIN- NEUROPHYSIN 2-COPEPTIN PRECURSOR [CONTAINS: ARG- VASOPRESSIN; NEUROPHYSIN 2 (NEUROPHYSIN-II); COPEPTIN] - Homo sapiens (Human), 164 aa.	Human Gene Similar to SWISSNEW- 7.20E-91 ACC:P01185 VASOPRESSIN- NEUROPHYSIN 2-COPEPTIN PRECURSOR [CONTAINS: ARG- VASOPRESSIN; NEUROPHYSIN 2 (NEUROPHYSIN-II); COPEPTIN] - Homo sapiens (Human), 164 aa.	Human Gene Similar to SWISSNEW-ACC:P01185 VASOPRESSIN-NEUROPHYSIN 2-COPEPTIN PRECURSOR [CONTAINS: ARGVASOPRESSIN; NEUROPHYSIN 2 (NEUROPHYSIN-II); COPEPTIN Homo sapiens (Human), 164 aa.
ASSI	UNCLASSI FIED	UNCLASSI	UNCLASSI
SILENT- UNCI NONCODI FIED NG	SILENT- NONCODI NG	SILENT- NONCODI NG	SILENT- UNC NONCODI FIED NG
F	F	ļ-	-
gap	U	O	0
CCCGCCCAGCCC g GACGCCTACTGA Glgap/TJCCCCGCG CTCGCCCCACCG GCGCGC	CCAGCCCGACGC CTACTGAGCCCC G[C/T]GCTCGCCC CACCGGCGCGCT CTTCG	AGCCCGACGCCT ACTGAGCCCCGC GIC/TITCGCCCCA CCGGCGCGCTCT TCGCG	CGACGCCTACTG AGCCCCGCGCTC GC/TCCCACCGG CGCGCTCTTCGC GCCCG
	1240	1242	1246
cg25236776 1234	cg25236776	cg25236776	cg25236776
410	411	412	413

X (Xp11.4)	11 11p15.2	7		-
5.00E-83 X	2.00E-70	1.60E-67	4.30E-66	4.30E-66
Human Gene Similar to REMTREMBL-ACC:E47283 DNA FOR ORF1 AND ORF2 FROM CHROMOSOME X - HOMO SAPIENS (HUMAN), 157 aa.	Human Gene Similar to SWISSNEW- 2.00E-70 ACC:P01258 CALCITONIN PRECURSOR - Homo sapiens (Human), 141 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD39844 HSPC028 - HOMO SAPIENS (HUMAN), 419 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD29427 MYOMEGALIN - RATTUS NORVEGICUS (RAT), 2324 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD29427 MYOMEGALIN - RATTUS NORVEGICUS (RAT), 2324 aa.
ASSI	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI
SILENT- UNCI NONCODI FIED NG	SILENT- NONCODI FIED NG	SILENT- NONCODI FIED NG	SILENT- UNCI NONCODI FIED NG	SILENT- NONCODI FIED NG
A	<u></u>	gap	gap	gap
	U	<b>⊢</b>	∢	Α
GCTACGTTTACTC gap ACAGCCAGCGAA[ gap/A]CTGACATTA AAATAACTAACAA	ACA CGCCTCTGATCCA AGCCACCTCCCG[ C/TCAGAGAGGTG TCATGGGCTTCCA	AA CTCTGCACAAGG GAAGCCTATCCTA [T/gap]TTTTTTTT CCTTTGCGAAAAC	AGA AATGCCTCAGATC AGTGACCCAAGG[ A/gap]ACCTTCCAG AATGGATGAATA	ATGCCTCAGATCA GTGACCCAAGGA[ Agap]CCTTCCAGA ATGGATGAAATAG
1362	104	356	1119	1120
cg43968406 1	cg42748886	cg43969533	cg43976681	cg43976681
414	415	416	417	418

	[22]		
10	9 (9922)	,	-
7.30E-66	6.60E-65	5.90E-64	Z.00E-54
Human Gene Similar to SPTREMBL-ACC:000455 TTF-1 INTERACTING PEPTIDE 20 - HOMO SAPIENS (HUMAN), 385 aa (fragment).	Human Gene Similar to SWISSPROT-ACC:P05062 FRUCTOSE-BISPHOSPHATE ALDOLASE B (EC 4.1.2.13) (LIVER- TYPE ALDOLASE) - Homo sapiens	(Human), 363 aa. Human Gene Similar to SPTREMBL- 5.90E-64 ACC:O76087 GAGE-8 - HOMO SAPIENS (HUMAN), 117 aa.	Human Gene Similar to \$WISSNEW- Z.00E-54 ACC:P47992 LYMPHOTACTIN PRECURSOR (CYTOKINE SCM-1) (ATAC) (LYMPHOTAXIN) (SCM-1- ALPHA) - Homo sapiens (Human), 114 aa.
ASSI	UNCLASSI FIED	UNCLASSI	UNCLASSI
SILENT- UNCI NONCODI FIED NG	SILENT- UNCI NONCODI FIED NG	SILENT- NONCODI NG	SILENT- UNC NONCODI FIED NG
<b>-</b>	4	∢	O
O	0	ပ	<u>ග</u>
CCAAGCGGAAGG C CCATTTCCCTGC[ C/TJCTTCCTCAGT TGTCCGGGGCGG	GGG CTAATTGTGTCGA ATTTCCAGGATT[G A]GAGGAAAAGTT GCTCCCTTTCAGC	C AAAGCAATCACAG TGTTAAAAGAAG[ G/A]CACGTTGAAA	CCAGCCAGCTCAT G TTCACTTTACAC[G /C]CTCATGGACTG AGTTTATACTCAC
714	398		
cg43984044 7	cg43933283	cg42381630 577	cg41664708 423
0 419	420	421	422

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13- (13q14.3 )	17 (17q21.3 2)	17 (17q21.3 2)	17 (17q21.3 2)
		0	0
Human Gene SWISSPROT- ID:P35670 COPPER- TRANSPORTING ATPASE 2 (EC 3.6.1.36) (COPPER PUMP 2) (WILSON DISEASE-ASSOCIATED PROTEIN) - HOMO SAPIENS (HUMAN), 1465 aa.	Human Gene SWISSPROT- ID: P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.
CONSER ATPase_as	cadherin	cadherin	cadherin
CONSER	CONSER	CONSER	CONSER
(652)	Gly (653)	Asp (654)	Asp (655)
Ala	Ala	Olu Olu	Asn
F	o	O	<u>o</u>
υ	0	o	4
AGCCTTCCCGCA GAAAAAGATGCAG [C/T]CCCCCAGAC CTTCTCTGTGCTG	TACCAGAGGCTG CATCGGCTGCGC G[C/G]AGAGCAGA TGGCGTCGTATTT	TGGTGGGCGCTC CACTGTATATGGA [G/C]AGCCGGGCA GACCGAAAACTG	CTCTCAACAGGCA A GGCACCACCCTG[ A/GJACCTGGATCT GGGCGGAAAGCA CAG
	1138	1238	1893
cg43277632 3906	cg40310734	cg40310734	cg40310734
423	424	425	426

9 (9p24)	(11923)	17 (17q25.2 )	17 (17q25.2 )
2		7.40E-199	7.40E-199
VSITY PPTOR) - 873 aa.	Human Gene SWISSNEW- ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.lpcls:SWISSPROT-ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.	glucoamylas Human Gene TREMBLNEW- e ID:G2826521 MALTASE- GLUCOAMYLASE (EC 3.2.1.20) - HOMO SAPIENS (HUMAN), 1857 aa.	glucoamylas Human Gene TREMBLNEW- e ID:G2826521 MALTASE- GLUCOAMYLASE (EC 3.2.1.20) - HOMO SAPIENS (HUMAN), 1857 aa.
	e -	glucoamylas e	
CONSER eph	CONSER	CONSER VATIVE	CONSER
Ala (656)	(657)	Arg (658)	Arg (659)
Gly	Arg	Ξ <u>Ξ</u>	Ξ Si T
O	⋖	o	Ø
o	O	∢	<
GGTTACAAGTGTG G AATGTAGTCGTG[ G/C]CTATCAAATG GATCTTGCTACTG	GCCGAGGACGTG CGTGGCAACCTG A[G/A]GGGCAACA CCGAGGGGCTGC AGAAG	TACGAGGTGCCC TTGGAGACCCCG C[A/G]TGTCCACA GCCGGGCACCGT	GAGGAGCCCTTC GGGGTGATCGTG C[A/G]CCGGCAGC TGGACGGCCGCG
1883	949	1036	1108
cg43982507 1883	cg41554010	cg43299024	cg43299024
427	428	429	430

2		(14q11.2 )	2 (2q21)
0	6.40E-91	9.90E-70	0
glycoprotein Human Gene SWISSPROT- ID:P98164 LOW-DENSITY LIPOPROTEIN RECEPTOR- RELATED PROTEIN 2 (MEGALIN) (GLYCOPROTEIN 330) - HOMO SAPIENS (HUMAN), 1751 aa (fragment).	glycoprotein Human Gene Similar to SWISSPROT-ID:P38159 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN G (HNRNP G) (GLYCOPROTEIN P43) - HOMO SAPIENS (HUMAN), 437 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.	Human Gene SWISSPROT- ID:P09848 LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62) (LACTASE- GLYCOSYLCERAMIDASE) - HOMO SAPIENS (HUMAN), 1927 aa.
glycoprotein	glycoprotein	glycoprotein	hydrolase
CONSER	CONSER VATIVE	CONSER	CONSER
(660)	Arg (661)	lle (662)	Val (663)
<u>e</u>	His Si	- Ka	<u>•</u>
O	<u></u>	⋖	<u>ග</u>
⋖	⋖	Ø	∢
GACTGACTGGGG AAAGGAACCTAAA [A/C]TCGAGTCTG CCTGGATGAATG GAGA	AGTTATTCTAGAG GATACAGAAATCĮ A/GITCGAAGTTCC CGAGAACTAGG GAG	GGACCAGGGGGC CATGCTGCTCAAT [G/A]TCTCAGGCC ACGTCAAGGAGA GCGC	TGCTTTTCAGGGC A GGAAACTCTCT[ A/G]TTGTCCTGCG AGCTGAAGATATC CC
12840	1004	2101	999
cg43285373	cg36834323	cg41568631	cg42359655
431	432	433	434 :

	<u>е</u>
16 (16q22)	18 (18q21.3 )
2.00E-220 16 (16	2.20E-149 18 (18 )
CONSER hydroxyster Human Gene SPTREMBL- VATIVE oid ID:Q13194 11-BETA- HYDROXYSTEROID DEHYDROGENASE TYPE 2 - HOMO SAPIENS (HUMAN), 405 aa.	CONSER immunoglob Human Gene Homologous to VATIVE SPTREMBL-ID:P91456 SIMILAR TO THE IMMUNOGLOBULIN SUPERFAMILY - CAENORHABDITIS ELEGANS, 1173 aa.
hydroxyster oid	immunoglob
CONSER VATIVE	CONSER
Leu (664)	Phe (665)
<u></u>	Tyr
⋖	<b>-</b>
ပ	⋖
GTGTGGGCCTTG C GTGAACTCTAGCA [C/A]GCGGCTAAT GTCCTGGTTTG GTC	GGAGATGTGGTC A ATTCCTAGTGATT[ ATJTTTCAGATA GTGGGAGGAAGC AAC
1331	1133
cg43998672   1331	cg43969028 1133
435	436

	10
2.50E-206	0
Human Gene SWISSNEW- ID:P29466 INTERLEUKIN-1 BETA CONVERTASE PRECURSOR (IL- 1BC) (EC 3.4.22.36) (IL-1 BETA CONVERTING ENZYME) (ICE) (INTERLEUKIN-1 BETA CONVERTING ENZYME) (P45) (CASPASE-1) (CASP-1) - HOMO SAPIENS (HUMAN), 404 aa.jpcls:SWISSPROT-ID:P29466 INTERLEUKIN-1 BETA CONVERTING ENZYME) (ICE) (INTERLEUKIN-1 BETA CONVERTING ENZYME) (ICE) (INTERLEUKIN-1 BETA CONVERTING ENZYME) (ICE) (INTERLEUKIN-1 BETA CONVERTING ENZYME) (A5) (CASPASE-1) (CASP-1) - HOMO SAPIENS (HUMAN), 404 aa.	Human Gene SWISSNEW- ID:P33176 KINESIN HEAVY CHAIN (UBIQUITOUS KINESIN HEAVY CHAIN) (UKHC) - HOMO SAPIENS (HUMAN); 963 aa. pcls:SWISSPROT-ID:P33176 KINESIN HEAVY CHAIN (UBIQUITOUS KINESIN HEAVY CHAIN) (UKHC) - HOMO SAPIENS (HUMAN); 963 aa.
VATIVE interleukin	kinesin
CATIVE	CONSER
Arg (666)	(667)
H.S.	
ဖ	∢
⋖	U
AAGGAGAAGAGA AAGCTGTTTATCC[ A/G]TTCCATGGGT GAAGGTACAATAA AT	GCCACTGTCTCTT CCAAACCCTTCA[ C/A]GCCTTGTCTT GCTTGTTCTCGTC TA
133	1163
cg43933479 133	cg43942537
437	438

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61	19	<u>6</u>	111
1.80E-113   19	1.80E-113	1.80E-113 19	. 0
Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene SWISSNEW- ID:P06401 PROGESTERONE RECEPTOR (PR) - HOMO SAPIENS (HUMAN), 933 aa.jpcls:SWISSPROT-ID:P06401 PROGESTERONE RECEPTOR (PR) - HOMO SAPIENS (HUMAN), 933 aa.
MHC	MHC	MHC	nucl_recpt
CONSER MHC	CONSER	CONSER	CONSER
Ne   (668)	Leu (669)	Asp (670)	(671)
Val	 	Asn	\alpha al
⋖	ပ	ග ්	<b>-</b>
ပ	ပ	⋖	o_
TTCCAAATGCTGA G GCCCAGAGCGTT[ G/A]TCTCCTGCCC ATGAGCACCACA GTC	CTGGAACAGTTTC CTCATTAGCCCT[ G/CJTGACCCCAG CACACGCAGGGA CCTA	TCATCGCTGGTGC A TCCAAAAAAAA(A /GJATGCTGCTGTA ATGAACCAAGAGG	GGATGCTGTTGCT G CTCCCACAGCCA[ G/IITGGGCGTTCC AAATGAAAGCCAA GC
1035	271	823	3434
cg38337333	cg38337333	cg38337333	cg30421838
439	440	441	442

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	3 (3p21.3)	<u>1</u>	12
4.10E-254	0	1.10E-97	1.10E-97
Human Gene SWISSPROT- ID:Q07869 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA (PPAR-ALPHA) - HOMO SAPIENS (HUMAN), 468 aa. pcls:SPTREMBL-ID:Q16241 PEROXISOME PROLIFERATOR ACTIVATED RECEPTOR ALPHA - HOMO SAPIENS (HUMAN), 468 aa (fragment).	Human Gene SWISSPROT. ID:P40692 MUTL PROTEIN HOMOLOG 1 (DNA MISMATCH REPAIR PROTEIN MLH1) - HOMO SAPIENS (HUMAN), 756 aa.	Human Gene Similar to SWISSPROT-ID:P01118 TRANSFORMING PROTEIN P21/K- RAS 2B - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SWISSPROT-ID:P01118 TRANSFORMING PROTEIN P21/K- RAS 2B - HOMO SAPIENS (HUMAN), 188 aa.
CONSER nucl_recpt	nuclease	oncogene	оисодепе
CONSER	CONSER	CONSER	CONSER
(672)	Val (673)	Glu (674)	Gin (675)
Ala	<u>e</u>	Gin	Glu
L	ပ	ဖ	O
ပ	   <b>-</b>	ပ	် ပ
GCCAATGGCATC CAGAACAAGGAG G[C/T]GGAGGTCC GCATCTTTCACTG CTGC	TCTCGACTAACAG CATTTCCAAAGA[T /C]GGAGCGAATAT TGTCCACGGTTGA G	GAGTGCCTTGAC GATACAGCTAATT[ C/GJAGAATCATTT TGTGGACGAATAT GA	AAGAAGTTATGGA ATTCCTTTTATT[G/ CJAAACATCAGCA AAGACAAGACAG GG
1019	1860	194	548
cg43064060 1019	cg43991813	cg42904626	cg42904626
443	444	445	446

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3 (3p14.2)	19	6 (6p12)
0	1.40E-79 1	φ
CONSER phosphatas Human Gene SWISSPROT- VATIVE e ID:P23470 PROTEIN-TYROSINE PHOSPHATASE GAMMA PRECURSOR (EC 3.1.3.48) (R-PTP-GAMMA) - HOMO SAPIENS (HUMAN), 1445 aa.	Human Gene Similar to SPTREMBL- ID:Q61469 PHOSPHATIDIC ACID PHOSPHATASE - MUS MUSCULUS (MOUSE), 283 aa.	Human Gene SWISSNEW- ID:P25205 DNA REPLICATION LICENSING FACTOR MCM3 (DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1) (RLF BETA SUBUNIT) (P102 PROTEIN) - HOMO SAPIENS (HUMAN), 808 aa.jpcls:SWISSPROT-ID:P25205 DNA REPLICATION LICENSING FACTOR MCM3 (DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1) (RLF BETA SUBUNIT) (P102 PROTEIN) - HOMO SAPIENS (HUMAN), 808 aa.
phosphatas e	phosphatas e	polymerase
CONSER	CONSER	CONSER
Val (676)	Ala (677)	(678)
Ala	\ \ \	Leu
<u> </u>	O	ල 
ပ	-	ပ
GCCGCCTCAGCC AGCAAGCAGGCG G[C/T]TAGGCCAG TCCTAGCCACCAC AGAG	GGGATGTACTGC ATGGTGTTCTTGG [T/C]GCTGTATGTG CAGGCACGACTC TGT	TCAGGTGGTGGG AACCTACCGTTGC [C/G]TTCCTGGAA AGAAGGGAGGCT ACAC
2845	582	807
cg42460457 2845	cg43272594	cg43958858
447	448	449

		r	
7 (7q21.3)	ω	12 (12q24.2 )	12 (12q24.2 )
1.20E-247   7	0	0	0
Human Gene SPTREMBL- ID:Q15113 PROCOLLAGEN C- PROTEINASE ENHANCER PROTEIN PRECURSOR - HOMO SAPIENS (HUMAN), 449 aa.	Human Gene SWISSPROT- ID:P54296 M-PROTEIN (165 KD TITIN-ASSOCIATED PROTEIN) (165 KD CONNECTIN- ASSOCIATED PROTEIN) - HOMO SAPIENS (HUMAN), 1465 aa.	Human Gene SWISSPROT- ID:P29475 NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I) (NEURONAL NOS) (NNOS) - HOMO SAPIENS (HUMAN), 1434 aa.	Human Gene SWISSPROT- ID:P29475 NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I) (NEURONAL NOS) (NNOS) - HOMO SAPIENS (HUMAN), 1434 aa.
protease	struct	synthase	synthase
CONSER protease	CONSER	CONSER	CONSER VATIVE
Ser (679)	Asp (680)	Leu (681)	Ala (682)
Thr	Asn	Val	Gly
<u> </u>	O	ပ	ပ
⋖	∢	<u>5</u>	<u></u>
GTACAGCGGGCG A GGCCACCTCGGG C[A/T]CTGAGCAC CAATTTGCGGGG GGCG	GGATGCTGGAGA GTGGATCACTGTC [A/G]ATCAGACGA CAACAGCCAACC GTTA	GATTCCTCCAGAG CTGGTGTTGGAA[ G/CJTTCCCATCAG GCACCCCAAGTTT GA	AAGTTTGAGTGGT G TCAAGGACCTGG[ G/C]GCTGAAGTG GTACGGCCTCCC CGCC
540	2745	2337	2380
cg43916732 540	cg42894809	cg40388639	cg40388639 2380
450	451	452	453

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.70E-79 16	.70E-79 16
Human Gene Similar to SWISSNEW- 7.70E-79 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL- ACTIVATING ENZYME) (ACETYL- COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.jpcis:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL- ACTIVATING ENZYME) (ACETYL- COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.	Human Gene Similar to SWISSNEW-7.70E-79 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.jpcls:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.
synthase	synthase
CONSER	CONSER
Gly (683)	Ser (684)
Ala	Thr
O	<b>—</b>
U	<b>4</b>
AATTTCTATATCA CTGGGGACAGAG[ C/GJATATATGGAT AAAGATGGGTATT TC	TGGAACAAGTGG ATATCCGAAAATG[ A/T]CTGCACACAC CCACAGCAGTTTT GG
1524	698
cg43124627	cg43124627
454	455

		3 (3q21)	ω
7.40E-65	7.00E-172	1.20E-55	5.50E-89
Human Gene Similar to SWISSNEW- 7.40E-65 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL- ACTIVATING ENZYME) (ACETYL- COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa. pcls:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL- ACTIVATING ENZYME) (ACETYL- COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.	Human Gene SWISSPROT- ID:P33032 MELANOCORTIN-5 RECEPTOR (MC5-R) (MC-2) - HOMO SAPIENS (HUMAN), 325 aa.	Human Gene Similar to SPTREMBL- ID:Q89609 G PROTEIN-COUPLED RECEPTOR - EQUINE HERPESVIRUS TYPE 2 (EHV-2), 383 aa.	Human Gene Similar to TREMBLNEW-ID:G2653845 TNF RECEPTOR-RELATED RECEPTOR FOR TRAIL - HOMO SAPIENS (HUMAN), 386 aa.
synthase	tm7	tm7	tnfreceptor
CONSER VATIVE	CONSER	CONSER	CONSER VATIVE
(685)	Phe (686)	Туг (687)	(688)
\ A	Tyr	Phe	Ala
۷	<b></b>	<b>—</b>	<b> </b>
9	<b>4</b>	∢	o l
AGGAGGGTGGT GAAGGCATTTGTG [G/A]TCCTGGCCT CGCAGTTCCTGTC CCA	GTGATGGACCCT CTCATATATGCCT[ A/TJCCGCAGCCAA GAGATGCGGAAG ACC	TTCCATCTGAGGT TTATAAACCACG(A /TJATTCAGGCAAA GTGGCCAGAATG GC	CAAGACCTAGCTC C CCCAGCAGAGAG C/TJGGCCCCACAA CAAAAGAGGTCCA GC
1464	1090	964	344
cg43064068	cg2514276	cg32423505	og43335558
456	457	458	459

127	9 (9q34)
1.70E-177 12:	6.50E-192 9 (9q34)
CONSER transcriptfac Human Gene SPTREMBL- VATIVE tor ID:Q07279 TRANSCRIPTION FACTOR NF-E2 - MUS MUSCULUS (MOUSE), 373 aa.	Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (NAGAT) - HOMO SAPIENS (HUMAN), 354 aa.
transcriptfac tor	VATIVE transferase
CONSER	CONSER
(689)	Ala (690)
Gin	Á Ö
ග	O
ပ	ပ
GACAGAGCTGTA (CCGTGACATTTTC  C/GJAGCACCTTCG GGATGAATCAGG CAA	GAGGCCGATTTCT G ACTACCTGGGGG[ G/CJGTTCTTCGGG GGGTCGGTGCAA GAG
:	008
cg43998970 1347	cg2537639
460	

	6 (6p21.3)		
ဖ	9	<b>o</b>	4.
0	0	0	0
Human Gene SWISSPROT- ID:003518 ANTIGEN PEPTIDE TRANSPORTER 1 (APT1) (PEPTIDE TRANSPORTER PSF1) (PEPTIDE TRANSPORTER PSF1) (PEPTIDE SUPPLY FACTOR 1) (PSF-1) (PEPTIDE TRANSPORTER INVOLVED IN ANTIGEN PROCESSING 1) - HOMO SAPIENS (HUMAN), 748 aa.	Human Gene SPTREMBL- ID:Q28437 ABC-TRANSPORTER - GORILLA GORILLA GORILLA (LOWLAND GORILLA), 703 aa.	Human Gene SPTREMBL- ACC:O14914 NEURONAL MUNC18- 1 BINDING PROTEIN - HOMO SAPIENS (HUMAN), 837 aa.	Human Gene SWISSPROT. ACC:P29374 RETINOBLASTOMA BINDING PROTEIN 1 (RBBP-1) - Homo sapiens (Human), 1257 aa.
transport	transport	UNCLASSI FIED	UNCLASSI FIED
CONSER	CONSER	CONSER	CONSER VATIVE
Val (691)	lle (692)	Val (693)	Val (694)
<u>e</u>	\alpha al	Ala	ren
O	∢	<b>-</b>	ပ
4	ပ	ပ	<sub>ပ</sub>
AGTGTCCCTCACC A ATGGTCACCCTG AGTCACCCTGC TCTGCTTTCCTT CT	CCTGGAACGCGC CTTGTACCTGCTC [G/A]TAAGGAGGG TGCTGCACTTGG GGGT	GAGCACGAGGAA GCCATGAATGCG G[C/T]CTACTCAG GCTACGTCTACAC GCAC	AGATACTTTCTAT AAGCAGTTTTTA[G /CJATTGTAGGAAG CAGCTGAATTCAA
1552	1424	730	3568
cg43935995	cg43935986	cg43968274	cg44018598
462	463	464	465

16	17	1 (1942)	22. (22q11.2 )	6 (6q23)
0	0	3.90E-257	3.30E-228	1.30E-171 (
Human Gene SWISSPROT- ACC:Q15046 LYSYL-TRNA SYNTHETASE (EC 6.1.1.6) (LYSINETRNA LIGASE) (LYSRS) (KIAA0070) - Homo sapiens (Human), 597 aa.	Human Gene SWISSPROT- ACC:P42694 HYPOTHETICAL PROTEIN KIAA0054 - Homo sapiens (Human), 1942 aa.	Human Gene SWISSPROT- ACC:P01019 ANGIOTENSINOGEN PRECURSOR - Homo sapiens (Human), 485 aa.	Human Gene SWISSPROT- ACC:P20062 TRANSCOBALAMIN II PRECURSOR - Homo sapiens (Human), 427 aa.	Human Gene SWISSPROT- ACC:P05089 ARGINASE 1 (EC 3.5.3.1) (LIVER-TYPE ARGINASE) - Homo sapiens (Human), 322 aa.
UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI	UNCLASSI FIED
CONSER VATIVE	CONSER	CONSER	CONSER	CONSER
Ser (695)	His (696)	(697)	Leu (698)	(699)
Thr	Arg	u Ö	<u>=</u>	ng
Ø	<u> </u>	ပ	ပ	ပ
U	ပ	O	⋖	O
ACACTGGAAAGCA CAACAGTTGGCA[ C/GJTTCTGTCTAG AAAATAATAATTG CA	AACGCTGCCCTG ACTGAGAAAGGC A[C/T]GATGCTCG CTCCACTGCTGGA	CATCCAGGACAAC TTCTCGGTGACTI C/GJAAGTGCCCTT CACTGAGAGCGC CTG	CTTCAACCCTGGT CGGAGACAACGG[ A/CJTCACCATGGC CATCAGAACAGTG CG	CTGATTCTTCCGT TCTTCTTGACTT[C /GJTGCCACCTTGC CAGCCAGCTGCT CG
1825	1622	1381	996	1148
cg44926796	cg43055918	cg43966985	cg43918854	cg43918484
466	467	468	469	470

		6 (6q25.3)	
9.60E-148	9.60E-148	5.70E-124	7.20E-91
Human Gene Homologous to SWISSNEW-ACC:Q12846 SYNTAXIN 4 - Homo sapiens (Human), 297 aa.	Human Gene Homologous to SWISSNEW-ACC:Q12846 SYNTAXIN 4 - Homo sapiens (Human), 297 aa.	Human Gene Homologous to SWISSNEW-ACC:P04179 SUPEROXIDE DISMUTASE [MN] PRECURSOR (EC 1.15.1.1) - Homo sapiens (Human), 222 aa.	CONSER UNCLASSI Human Gene Similar to SWISSNEW- 7.20E-91 VATIVE FIED ACC:P01185 VASOPRESSIN- NEUROPHYSIN 2-COPEPTIN PRECURSOR [CONTAINS: ARG- VASOPRESSIN; NEUROPHYSIN 2 (NEUROPHYSIN-II); COPEPTIN] - Homo sapiens (Human), 164 aa.
CONSER UNCLASSI	UNCLASSI FIED	UNCLASSI	UNCLASSI
CONSER	CONSER	CONSER	CONSER VATIVE
Val (700)	Asp (701)	Gin (702)	Val (703)
Ala	Ogn Ogn	n ©	Gly
<b>—</b>	<b>-</b>	U	<b> -</b>
O	ပ	ပ	O
ACGGCCCTGGAG C AACCAGAAGAAG G[C/T]GAGGAAGA AGAAAGTCTTGAT TGCC	GGATGGTGTCTG ATGAGGAGTTGG A[G/T]CAGATGCT GGACAGTGGGCA AAGCG	TTGGGGTTGGCTT GGTTTCAATAAG G/CJAACGGGGAC ACTTACAAATTGC TGC	GTGACCGAGCCC GAGTGCCGCGAG G[G/T]CTTTCACC GCCGCGCCCGCG CCAGC
1009	725	921	1094
cg43942977 1009	cg43942977	cg43943361	cg25236776 1094
471	472	473	474

7.20E-91	5.70E-75	1.30E-66	1.60E-54	1.60E-54
Human Gene Similar to SWISSNEW- 7.20E-91 ACC:P01185 VASOPRESSIN- NEUROPHYSIN 2-COPEPTIN PRECURSOR [CONTAINS: ARG- VASOPRESSIN; NEUROPHYSIN 2 (NEUROPHYSIN-II); COPEPTIN] - Homo sapiens (Human), 164 aa.	Human Gene Similar to REMTREMBL-ACC:G292791 T. CELL RECEPTOR BETA PRECURSOR - HOMO SAPIENS (HUMAN), 145 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G2104755 T CELL RECEPTOR V-BETA 23 - HOMO SAPIENS (HUMAN), 129 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).
UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI FIED
CONSER	CONSER	CONSER VATIVE	CONSER	Asp CONSER (708) VATIVE
Val (704)	Leu (705)	His (706)	lle (707)	Asp (708)
Gly	Na Na	Arg	\ \ 	Olu
<b> </b>	O	∢	⋖	ပ
ග	ပ	O	<b>o</b>	<u>ග</u>
CAGTGCCTCCCCT GCGGCCCGGGG [G/T]CAAAGGCCG CTGCTTCGGGCC CAGC	GGCCAACTCTGCT ATGGACACCAGA G/CJTACTCTGCTG TGCGGTCATCTGT CT	GCCTGGAACACC AGGCTCCTCTGC C[G/A]TGTCATGCT TTGTCTCCTGGGA GCA	AGCCACCCAGAC CGGAGACTCGGC C[G/A]TCTACCTCT GTGCTGTGGAGG	CGGCCGTCTACC TCTGTGCTGTGGA [G/C]GCCTATTCTA ACGACTACAAGCT CA
188	30	253	519	539
cg25236776	cg38899722	cg11753818	cg2526759	cg2526759
475	476	477	478	479

	13 (13q14.3
	(130)
2.10E-52	0
CONSER UNCLASSI Human Gene Similar to SWISSPROT-ACC:P01286 SOMATOLIBERIN PRECURSOR (GROWTH HORMONE-RELEASING FACTOR) (GRF) (GROWTH HORMONE-RELEASING HORMONE) (GHRH) (SOMATOCRININ) - Homo sapiens (Human), 108 aa.	ATPase_as Human Gene SWISSPROT- sociatedID:P35670 COPPER- TRANSPORTING ATPASE 2 (EC 3.6.1.36) (COPPER PUMP 2) (WILSON DISEASE-ASSOCIATED PROTEIN) - HOMO SAPIENS (HUMAN), 1465 aa.
UNCLASSI FIED	
CONSER	NON- CONSER VATIVE
Asp (709)	Gly (710)
<u>Glu</u>	Arg
<u> </u>	<u></u> ပ
O	⋖
CAGAACAAAAGCA G AATGGAATTGGA[ G/TJAGCATCCTGG TGGCCCTGCTGC AGA	GAAACCCGGAAG A CACTGTAATTGCG [A/G]GGTCTATAAA TGCACATGGCTCT GT
368	
cg1902363	cg43277632 3110
480	481

X (Xq12)	(3921)	17 (17q21.3 2)
0	8.20E-288 3 (3q21)	0
Human Gene SWISSNEW- ID:Q04656 COPPER- TRANSPORTING ATPASE 1 (EC 3.6.1.36) (COPPER PUMP 1) (MENKES DISEASE-ASSOCIATED PROTEIN) - HOMO SAPIENS (HUMAN), 1500 aa. jpcls:SWISSPROT-ID:Q04656 COPPER-TRANSPORTING ATPASE 1 (EC 3.6.1.36) (COPPER PUMP 1) (MENKES DISEASE-ASSOCIATED PROTEIN) - HOMO SAPIENS (HUMAN), 1500 aa.	Human Gene SWISSPROT- ID:P05166 PROPIONYL-COA CARBOXYLASE BETA CHAIN PRECURSOR (EC 6.4.1.3) (PCCASE) (PROPANOYL- COA:CARBON DIOXIDE LIGASE) - HOMO SAPIENS (HUMAN), 539 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.
ATPase_as sociated	biotindep	cadherin
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
e (711)	Ser (712)	Ala (713)
Thr	o O	Pro
<u> </u>	 	O
O	O	U
TGTATTCCTGTAA TGGGGCTGATGA[ C/TJATATATGATG GTTATGGACCACC AC	GCCCCTGAGCAG TCAGGACCCGGC T[C/T]CCGTCCGT GAGTGCCACGAT CCCAG	GGAGTGGGTGCT GCTGCTCTTGGG A[C/G]CTTGTGCT GCCCTCCAGCC TGGGC
2306	929	267
cg43252813 '	cg43920913	cg40310734
482 	483	484

174 (17q21.3 2)	1 (1923)
0	1.00E-218 1 (1q23)
Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSPROT- ID:P14151 L-SELECTIN PRECURSOR (LYMPH NODE HOMING RECEPTOR) (LEUKOCYTE ADHESION MOLECULE-1) (LAM-1) (LEUKOCYTE SURFACE ANTIGEN LEU-8) (TQ1) (GP90-MEL) (LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 1) (LECAM1) (CD62L) - HOMO SAPIENS (HUMAN), 372 aa.
cadherin	cadherin
NON- CONSER VATIVE	NON- CONSER VATIVE
Ala (714)	(715) (715)
Pro	Phe
O	O
O	<u> </u>
CGTGTCCTCCCTC C CCCTATGCGGTG[ C/G]CCCGCTCA GCCTGCCCCGAG GGGA	GGGGTACTATGG GCCCAGTGTCA G[T/C]TTGTGATTC AGTGTGAGCCTTT GGA
3111	777
cg40310734 3111	cg43956560 777
485	486 86

L.41 15.41 a

3

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1923)		
	4	
1.00E-218   1 (1q23)	7.00E-172	0
Human Gene SWISSPROT- ID:P14151 L-SELECTIN PRECURSOR (LYMPH NODE HOMING RECEPTOR) (LEUKOCYTE ADHESION MOLECULE-1) (LAM-1) (LEUKOCYTE SURFACE ANTIGEN LEU-8) (TQ1) (GP90-MEL) (LEUKOCYTE-ENDOTHELIAL CELL ADHESION MOLECULE 1) (LECAM1) (CD62L) - HOMO SAPIENS (HUMAN), 372 aa.	Human Gene SWISSPROT- ID:P21815 BONE SIALOPROTEIN II PRECURSOR (BSP II) (CELL- BINDING SIALOPROTEIN) (INTEGRIN-BINDING SIALOPROTEIN) - HOMO SAPIENS (HUMAN), 317 aa.	calcium_cha Human Gene SWISSPROT- nnel ID:P21817 RYANODINE RECEPTOR, SKELETAL MUSCLE (SKELETAL MUSCLE CALCIUM RELEASE CHANNEL) - HOMO SAPIENS (HUMAN), 5032 aa.
cadherin	cadherin	calcium_cha nnel
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Ser (716)	Gly (717)	Cys (718)
Pro	Arg	Arg
F	ග	<u> </u>
O	∢	U
GCTGGGTACCAT GGACTGTACTCAC [C/T]CTTTGGGAAA CTTCAGCTTCAGC TC	TGCAGAAGGCAC CACAGAGACCGG A[AG]GGCAGGGC AAGGGCACCTCG AAGAC	GTGTGTGTGTAAT GGTGTGGCTGTA C/TJGCTCCAACCA AGATCTTATTACT GA
837	753	1945
cg43956560	cg42388009	cg43977436
487	488	489



2	9	<b>•</b>	X (Xq22)
carboxylase Human Gene SWISSPROT- ID:P38435 VITAMIN K-DEPENDENT GAMMA-CARBOXYLASE (EC 6.4 ) (GAMMA-GLUTAMYL CARBOXYLASE) - HOMO SAPIENS (HUMAN), 758 aa.	Human Gene SWISSPROT- ID:Q03692 COLLAGEN ALPHA 1(X) CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 680 aa.	Human Gene SWISSPROT- ID:Q03692 COLLAGEN ALPHA 1(X) CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 680 aa.	Human Gene SPTREMBL- ID:Q12823 A TYPE IV COLLAGEN - HOMO SAPIENS (HUMAN), 1690 aa (fragment).
carboxylase	collagen	collagen	collagen
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Arg (719)	Gly (720)	Met (721)	Thr (722)
<u>G</u> D	G D	Thr	<u>=</u>
O	ပ	<b>—</b>	<u>ග</u>
4	⋖	ပ	⋖
CGGAAGCTGGTG TCCTACTGCCCCC [A/G]AAGGTTGCA ACAACTGTTGCCC CTC	CCAGGGCCTCCA GGTCCAAGAGGC C[A/C]CTCTGGAG AGCCTGGTCTTCC AGGG	GTGTTTTACGCTG AACGATACCAAAI C/TJGCCCACAGG CATAAAAGGCCCA	TCCAGGAATACCA A GGTCTGCCTGGT[ A/G]TTCCTGGAAC AAGAGGATTAAAA GG
1130	1595	176	2855
cg43280376 1130	cg42201364	cg42201364	cg40339378
490	491	492	493

1 (1p32)	1 (1p32)	5 (5013)	1 (1p21)
0	0	0	5.00E-304 1 (1p21)
complement Human Gene SWISSNEW- ID:P07358 COMPLEMENT COMPONENT C8 BETA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 591 aa. pcls:SWISSPROT-ID:P07358 COMPLEMENT COMPONENT C8 BETA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 591 aa.	complement Human Gene SWISSPROT- ID:P07357 COMPLEMENT COMPONENT C8 ALPHA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 584 aa.	complement Human Gene TREMBLNEW-ID:G386348 COMPLEMENT C6 - HOMO SAPIENS, 941 aa.	Human Gene SWISSPROT- ID:P09603 MACROPHAGE COLONY STIMULATING FACTOR-1 PRECURSOR (CSF-1) (MCSF) - HOMO SAPIENS (HUMAN), 554 aa.
complement	complement	complement	ડ્ર
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Gly (723)	Gin (724)	Ala (725)	Pro (726)
Arg	Lys	Olu Olu	
o	ပ	O	ပ
⋖	⋖	⋖	F
AGACTGTGTTACC A AACAGACCATGC[ A/G]GAAGTCAAGT GCGATGTGAAGG CTT	CTCCAGTTCTACA ACTTGTGTAAGGI ACJAAGCACAGTG TGGACAGGATTTC CA	CAGTTTGGGGGA CAGCCATGCACT G[A/C]GCCTCTGG TAGCCTTTCAACC ATGC	CCAGGCTCTCCC AGGATCTCATCAC [T/C]GCGCCCCCA GGGCCTCAGCAA CCCC
909	414	533	1347
cg43063256	cg44032748	cg43049885	og2164442
494	495	496	497

υ	17
1.10E-77	1.70E-52
Human Gene Similar to SWISSNEW- 1D:P08700 INTERLEUKIN-3 PRECURSOR (IL-3) (MULTIPOTENTIAL COLONY- STIMULATING FACTOR) (HEMATOPOIETIC GROWTH FACTOR) (MAST-CELL GROWTH FACTOR) (MAST-CELL GROWTH FACTOR) (MGGF) - HOMO SAPIENS (HUMAN), 152 aa.jpcls:SWISSPROT-ID:P08700 INTERLEUKIN-3 PRECURSOR (IL- 3) (MULTIPOTENTIAL COLONY- STIMULATING FACTOR) (HEMATOPOIETIC GROWTH FACTOR) (P-CELL STIMULATING FACTOR) (MAST-CELL GROWTH FACTOR) (MGGF) - HOMO SAPIENS (HUMAN), 152 aa.	cytochrome Human Gene Similar to SWISSPROT-ID:P21592 CYTOCHROME C OXIDASE ASSEMBLY PROTEIN COX10 PRECURSOR - SACCHAROMYCES CEREVISIAE (BAKER'S YEAST), 462 aa.
ડેડ	cytochrome
NON- CONSER VATIVE	NON- CONSER VATIVE
Ser (727)	His (728)
Pro	Tyr Yr
<b>-</b>	ڻ ت
0 0 = 0 0	<b>⋖</b>
CCAAGCTCCCATG ACCCAGACACG C/TCCTTGAAGAC AAGCTGGGTTAAC TG	TCCACGTAGAAGC A GGAAGCCGAGGT[ A/G]GGAGATGTAC GCATTGATGGGAA GG
279	1651
cg2753430	cg43923204
868	4 99 9

22	(1p36.2)	4 (4q22)
	8.80E-78	1.30E-209 4 (4q22)
Human Gene Similar to SPTREMBL- 2.40E-52 ID:000761 CYTOCHROME OXIDASE SUBUNIT VIA HEART ISOFORM PRECURSOR (EC 1.9.3.1) (CYTOCHROME A(3)) (CYTOCHROME AA(3)) - HOMO SAPIENS (HUMAN), 97 aa.	Human Gene Similar to SWISSPROT-ID:P32320 CYTIDINE DEAMINASE (EC 3.5.4.5) (CYTIDINE AMINOHYDROLASE) - HOMO SAPIENS (HUMAN), 146 aa. pcls: TREMBLNEW-ID:E1228801 CYTIDINE DEAMINASE (EC 3.5.4.5) - HOMO SAPIENS (HUMAN), 146 aa.	dehydrogen Human Gene SWISSNEW- ase ID:P08319 ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (EC 1.1.1.1) - HOMO SAPIENS (HUMAN), 391 aa. pcls:SWISSPROT-ID:P08319 ALCOHOL DEHYDROGENASE CLASS II PI CHAIN (EC 1.1.1.1) - HOMO SAPIENS (HUMAN), 391 aa.
cytochrome	deaminase	dehydrogen ase
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
GIn (729)	Gin (730)	Gly (731)
O O	Lys	End
<b>-</b>	ပ	ပ
O	∢	F
TTGGTAGGGACG GAACTCGGGGCG C[G/T]GGCGGTGG CCCGAGTGGAGA TAGGA	GCTGGTTTGCTCC CAGGAGGCCAAG[ A/C]AGTCAGCCTA CTGCCCTACAGT CA	AAGCATCCGAACA ATCCTCATCTT[I/ GJGAAGATGCCAG GAGCAATTCGGAA T
174	279	1618
cg44017721 174	cg41626024	cg43057018
200	501	502

-	-	(1p36.13
3.90E-86	5.50E-57	1.30E-60
dna_rna_bi Human Gene Similar to nd TREMBLNEW-ID:G913312 DNA BINDING PROTEIN MEF2 {CLONE XMEF2A1} - XENOPUS LAEVIS, 516 aa.	Human Gene Similar to SPTREMBL- 5.50E-57 ID:Q61491 DNA-BINDING PROTEIN - MUS MUSCULUS (MOUSE), 546 aa.	Human Gene Similar to SWISSNEW-ID:Q02535 DNA-BINDING PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR HLH 1R21) (HELIX-LOOP-HELIX PROTEIN HEIR-1) - HOMO SAPIENS (HUMAN), 119 aa. jpcls:SWISSPROT-ID:Q02535 DNA-BINDING PROTEIN INHIBITOR ID-3 (ID-LIKE PROTEIN INHIBITOR HLH 1R21) (HELIX-LOOP-HELIX PROTEIN HEIR-1) - HOMO SAPIENS (HUMAN), 119 aa.
dna_rna_bi nd	dna_rna_bi nd	dna_rna_bi nd_inhib
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Ala (732)	Lys (733)	Thr (734)
Thr	Asn	Ala
ပ	∢	<b>—</b>
⋖	ن ن	O
CCGCACCAACGC CGACATCATCGAG [A/G]CCCTGAGGA AGAAGGGCTTCAA GGG	TCCACGACCGGG TAGAGAACTACAA [C/A]CCGCGGGCAG CGCAAGCTCCGC AACC	TCGTTGGAGATGA CAAGTTCCGGAG[ C/TJGAGCTCGGCT GTCTGGATGGGA AGG
464	2205	707
cg42837709	cg43327954	cg43971258
503	504	505

(11923)	
1.80E-203 11 (1.	1.90E-178
Human Gene SWISSNEW- ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.jpcis:SWISSPROT-ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.	Human Gene SWISSNEW- ID:Q15166 SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A- ESTERASE 3) - HOMO SAPIENS (HUMAN), 341 aa (fragment), pcls:SWISSPROT- ID:Q15166 SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A- ESTERASE 3) - HOMO SAPIENS (HUMAN), 341 aa (fragment).
ebh	esterase
NON- CONSER VATIVE	NON- CONSER VATIVE
His (735)	Glu (736)
Gin	ΘĮ <b>γ</b>
<u> </u>	<del>-</del>
စ	O
AGCTGGAGCAAC AGCAGGAACAGC A[G/T]CAGGAGCA GCAGCAGGAGCA GGTGC	GTTTGGCATACCT GGATATTTTAAT[C MJCAGTGGAGATA AAAGACAGCCCA CT
1253	1063
cg41554010	cg43957743
909	207

	15 (15q15)
1.90E-178	9.30E-106 15 (15
Human Gene SWISSNEW- ID:Q15166 SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A- ESTERASE 3) - HOMO SAPIENS (HUMAN), 341 aa (fragment), pcls:SWISSPROT- ID:Q15166 SERUM PARAOXONASE/ARYLESTERASE 3 (EC 3.1.1.2) (EC 3.1.8.1) (PON 3) (SERUM ARYLDIAKYLPHOSPHATASE 3) (A- ESTERASE 3) - HOMO SAPIENS (HUMAN), 341 aa (fragment).	Human Gene Homologous to SWISSPROT-ID:P21781 KERATINOCYTE GROWTH FACTOR PRECURSOR (KGF) (FIBROBLAST GROWTH FACTOR- 7) (FGF-7) (HBGF-7) - HOMO SAPIENS (HUMAN), 194 aa.
esterase	fgf
CONSER VATIVE	NON- CONSER VATIVE
Ala (737)	Glu (738)
Ser	Lys
O	တ
<b>d</b>	<b>d</b>
TATTTTAATCCAG TGGAGATAAAAG[ A/CJCAGCCCACTA GGAAGTATATCAA TA	AAGTGAATTCTAT / CTTGCAATGAAC[ A/GJAGGAAGGAAA ACTCTATGCAAAG AA
1079	812
cg43957743	cg43248101
208	

r	
2	12
7.40E-80	0
glucuronida Human Gene Similar to SWISSPROT-ID:P08236 BETA- GLUCURONIDASE PRECURSOR (EC 3.2.1.31) (BETA-G1) - HOMO SAPIENS (HUMAN), 651 aa.	glycoprotein Human Gene SWISSNEW- ID:P40967 MELANOCYTE PROTEIN PMEL 17 PRECURSOR (MELANOCYTE LINEAGE- SPECIFIC ANTIGEN GP100) (MELANOCYTE LINEAGE- SPECIFIC ANTIGEN GP100) (MELANOMA-ASSOCIATED ME20 ANTIGEN) (ME20MME20S) (ME20- MME20-S) (95 KD MELANOCYTE- SPECIFIC SECRETED GLYCOPROTEIN) - HOMO SAPIENS (HUMAN), 661 aa.lpcis:SWISSPROT-ID:P40967 MELANOCYTE PROTEIN PMEL 17 PRECURSOR (MELANOCYTE LINEAGE-SPECIFIC ANTIGEN GP100) (MELANOMA-ASSOCIATED ME20-S) (95 KD MELANOCYTE- SPECIFIC SECRETED GLYCOPROTEIN) - HOMO SAPIENS (HUMAN), 661 aa.
glucuronida se	glycoprotein
NON- CONSER VATIVE	NON- CONSER VATIVE
lle (739)	Arg (740)
Arg	Po
⋖	ပ
O	ග
GATGAGCTCTCCA C ACCACGTATTTIC /AJTGCGTTTTTGA TCCAGACCCAGAT G	CACCAGCAAGAT GCCCACGATCAG C[G/C]GAACCTGC CCAAGGCCTGCTT CTTG
332	387
cg43969014 332	cg43286488
510	511

o	0	0
glycoprotein Human Gene SWISSPROT- ID:Q12889 OVIDUCT-SPECIFIC GLYCOPROTEIN PRECURSOR (OVIDUCTAL GLYCOPROTEIN) (OVIDUCTIN) (ESTROGEN- DEPENDENT OVIDUCT PROTEIN) - HOMO SAPIENS (HUMAN), 678 aa.	glycoprotein Human Gene SWISSPROT- ID:Q12889 OVIDUCT-SPECIFIC GLYCOPROTEIN PRECURSOR (OVIDUCTAL GLYCOPROTEIN) (OVIDUCTIN) (ESTROGEN- DEPENDENT OVIDUCT PROTEIN) HOMO SAPIENS (HUMAN), 678 aa.	glycoprotein Human Gene SWISSPROT- ID:Q12889 OVIDUCT-SPECIFIC GLYCOPROTEIN PRECURSOR (OVIDUCTAL GLYCOPROTEIN) (OVIDUCTIN) (ESTROGEN- DEPENDENT OVIDUCT PROTEIN) - HOMO SAPIENS (HUMAN), 678 aa.
glycoprotein	glycoprotein	glycoprotein
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
His (741)	Pro (742)	Thr (743)
Tyr	Ser	Met
O	<u>ဖ</u>	o ع
4	∢	∢
TTTTCCCCAGGGG A TCACAGACTGAT[ A/GJACCCACAGAG GTCAGGGTCTTCT GT	GGGGTCACAGAC TGATAACCCACAG [A/G]GGTCAGGGT CTTCTGTCCAGTG GTC	CTGATGACCCACA A GAAGTCATGGTC[ A/G]TTGCCCCAGT GATCTCAGTCTTC TC
99	672	773
cg44004239	cg44004239	cg44004239
512	513	514

6.0 Gall 16.0 Will 16.0 Wi

(11pter)	1(1921)
1.80E-195	2.00E-183
glycoprotein Human Gene SWISSPROT- ID:P16070 CD44 ANTIGEN PRECURSOR (PHAGOCYTIC GLYCOPROTEIN I) (PGP-1) (HUTCH-I) (EXTRACELLULAR MATRIX RECEPTOR-III) (ECMR-III) (GP90 LYMPHOCYTE HOMING/ADHESION RECEPTOR) (HERMES ANTIGEN) (HYALURONATE RECEPTOR) (HEPARAN SULFATE PROTEOGLYCAN) (EPICAN) (CDW44) - HOMO SAPIENS (HUMAN), 742 aa.	glycoprotein Human Gene SWISSNEW- ID:P06126 T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T- CELL SURFACE ANTIGEN T6/LEU- 6) (HTA1 THYMOCYTE ANTIGEN) - HOMO SAPIENS (HUMAN), 327 aa.[pcls:SWISSPROT-ID:P06126 T- CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL SURFACE ANTIGEN T6/LEU-6) (HTA1 THYMOCYTE ANTIGEN) - HOMO SAPIENS (HUMAN), 327 aa.
glycoprotein	glycoprotein
NON- CONSER VATIVE	NON- CONSER VATIVE
Tyr (744)	(745)
Se	TH
<u> </u>	<u></u>
O	O
ATATGTGTCATAC TGGGAGGTGTTG[ G/JATGTGAGGAT GTACACCCCTGTG TT	AAGGAGCCTCTCT CCTTCCATGTCA C/TJCTGGATCGCA TCCTTTTACAACC AT
1504	622
cg43932434 1504	cg40915005 622
515	516

1921)		
2.00E-183 1 (1q21)	6.40E-91	6.40E-91
glycoprotein Human Gene SWISSNEW- ID:P06126 T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL SURFACE ANTIGEN T6/LEU-6) (HTA1 THYMOCYTE ANTIGEN) - HOMO SAPIENS (HUMAN), 327 aa.lpcls:SWISSPROT-ID:P06126 T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL SURFACE ANTIGEN T6/LEU-6) (HTA1 THYMOCYTE ANTIGEN) - HOMO SAPIENS (HUMAN), 327 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID: P38159 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN G (HNRNP G) (GLYCOPROTEIN P43) - HOMO SAPIENS (HUMAN), 437 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID: P38159 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN G (HNRNP G) (GLYCOPROTEIN P43) - HOMO SAPIENS (HUMAN), 437 aa.
glycoprotein	glycoprotein	glycoprotein
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Cys (746)	Cys (747)	Thr (748)
T Ģ	Туг	Lys
O	g	O
O	⋖	<b> </b>
ATTCCAGCACCAT G CGTTTCCTGTG GCGCCTGGTCCA GGGGAAACTTCA GCA	GTGCTCCCTGATC A CTCGTGAAGCAT[ A/GJTGGTAGCTCA AGTTATGTGGCAT CT	AATGCTGCGAAAG A ATATGAATGGAA[A /C]GTCTTTGCATG GAAAAGCAATAAA A
737	1529	329
cg40915005	cg36834323	cg36834323
517	518	519

75	30	88	188 2
6.40E-91	2.50E-80	9.40E-58	2.60E-188
glycoprotein Human Gene Similar to SWISSPROT-ID:P38159 HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN G (HNRNP G) (GLYCOPROTEIN P43) - HOMO SAPIENS (HUMAN), 437 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:P04216 THY-1 MEMBRANE GLYCOPROTEIN PRECURSOR (THY-1 ANTIGEN) (CDW90) (CD90 ANTIGEN) - HOMO SAPIENS (HUMAN), 161 aa.	glycoprotein Human Gene Similar to SWISSPROT-ID:Q05910 CELL SURFACE ANTIGEN MS2 PRECURSOR (EC 3.4.24) (MACROPHAGE CYSTEINE- RICH GLYCOPROTEIN) (CD156 ANTIGEN) - MUS MUSCULUS (MOUSE), 826 aa.	Human Gene SWISSPROT- ID:P28356 HOMEOBOX PROTEIN HOX-D9 (HOX-4C) (HOX-5.2) - HOMO SAPIENS (HUMAN), 342 aa.
glycoprotein	glycoprotein	glycoprotein	homeobox
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Arg (749)	His (750)	Gly (751)	Asp (752)
Ser	Asn	Arg	Ala
O	<u>o</u>	<u>ပ</u>	<b>—</b>
⋖	<b>—</b>	<b>V</b>	ဖ
AAGTCTGAGATCT GCAAGAGGAAGCI A/CJGTGGAGGAA CAAGAGGGTGGC TTCC	GCGGATAAGTAG AGGACCTTCATGT [T/G]GTATTTGCTG GTGAAGTTGGTTC GG	CTTAGACATACAA TATACTTACCTT[AV GJGAGGTCACGTA TGTTTGTCCGCAC A	GGAGCGAGCGTG GATCCAGTTCGC G[G/T]CGGGGTTG TTTGGGTCAAGTT GCTG
463	1697	1665	980
cg36834323	cg44019290	cg42336656	cg42730678
520	521	522	523

	2 (2q21)	
1.10E-123	0	0
Human Gene Homologous to SWISSPROT-ID:P17509 HOMEOBOX PROTEIN HOX-86 (HOX-2B) (HOX-2.2) (HU-2) - HOMO SAPIENS (HUMAN), 224 aa.	Human Gene SWISSPROT- ID:P09848 LACTASE-PHLORIZIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62) (LACTASE- GLYCOSYLCERAMIDASE) - HOMO SAPIENS (HUMAN), 1927 aa.	Human Gene SWISSPROT- ID:Q16666 GAMMA-INTERFERON- INDUCIBLE PROTEIN IFI-16 (INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR) - HOMO SAPIENS (HUMAN), 729 aa.jpcls:SPTREMBL-ID:Q16666 IF116=INTERFERON-INDUCIBLE MYELOID DIFFERENTIATION TRANSCRIPTIONAL ACTIVATOR - HOMO SAPIENS (HUMAN), 729 aa (fragment).
homeobox	hydrolase	interferon
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Ser (753)	Ala (754)	His (755)
<u>e</u>	Thr	Asp
O	ග	<u>ග</u>
<b>-</b>	∢	ن
GCCCTGTGCCTG ACGGAGAGGCAG A[T/G]CAAGATATG GTTCCAGAACCGA CGC	CTGGGCACCATAT A AGGATAGCCCAC[ AGCCGTCATCAA AGCCCATGCCAG AGT	GTGGAGGGTGCA GGTGAAGTAGCAT [C/G]CACTTCCTTC TTCCTCTTTCTTG AT
692	3297	2172
cg42714160   769	cg42359655	cg43925670 2172
524	525	526

10	21 (21q22.1 )	14 (14q32.3 )	11 (20p13)	11 (20p13)
0	0	1.40E-262	2.00E-215	2.00E-215
Human Gene SWISSPROT- ID:Q04759 PROTEIN KINASE C, THETA TYPE (EC 2.7.1) (NPKC- THETA) - HOMO SAPIENS (HUMAN), 706 aa.	Human Gene SWISSPROT- ID:Q13627 SERINE/THREONINE- SPECIFIC PROTEIN KINASE MINIBRAIN HOMOLOG (EC 2.7.1) (HP86) (DYRK) - HOMO SAPIENS (HUMAN), 763 aa.	Human Gene SWISSPROT- ID:P31749 RAC-ALPHA SERINE/THREONINE KINASE (EC 2.7.1) (RAC-PK-ALPHA) (PROTEIN KINASE B) (PKB) (C-AKT) - HOMO SAPIENS (HUMAN), 480 aa.	Human Gene SWISSPROT- ID:P19138 CASEIN KINASE II, ALPHA CHAIN (CK II) (EC 2.7.1.37) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 391 aa.	Human Gene SWISSPROT- ID:P19138 CASEIN KINASE II, ALPHA CHAIN (CK II) (EC 2.7.1.37) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 391 aa.
kinase	kinase	kinase	kinase	kinase
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Leu (756)	Asn (757)	Ser (758)	Val (759)	Arg (760)
Pro	Lys	gi <del>y</del>	Met	Ser
<u> </u>	<b></b>	<b>-</b>	U	ڻ ن
O	ပ	O	<b>⊢</b>	<b>⊢</b>
TGCTCCATCAAAA ATGAAGCAAGGC[ C/TJGCCATGTTTA CCGACACCGGGA AAA	CAAAAGCAAGAAA GTTCTTTGAGAA[ G/TJTTGCCAGATG GCACTTGGAACTT AA	AGTCCACCGCCG CCTCAGGCCGTG C[C/T]GCTGGCCG AGTAGGAGAACT GGGGG	GGCACTGAAGAA ATCCCTGACATCA [T/C]ATTGGCGCT GCTGACGGGCGT ACTG	GGGCTGACAAGG TGCTGATTTCAC[ T/G]GTGGACAAAG CGTTCCCATCGCT TT
1083	2663	1226	1429	1621
cg43090990	cg43969763	cg43932396	cg43917871	cg43917871
527	528	529	530	531

11 (20p13)	11 (20p13)	(19q13.1
2.00E-215 11 (20	2.00E-215	0
Human Gene SWISSPROT- ID:P19138 CASEIN KINASE II, ALPHA CHAIN (CK II) (EC 2.7.1.37) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 391 aa.	Human Gene SWISSPROT- ID:P19138 CASEIN KINASE II, ALPHA CHAIN (CK II) (EC 2.7.1.37) - HOMO SAPIENS (HUMAN), AND BOS TAURUS (BOVINE), 391 aa.	kinaserecep Human Gene SWISSNEW- ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa.lpcls:SWISSPROT-ID:P30530 TYROSINE-PROTEIN KINASE RECEPTOR UFO PRECURSOR (EC 2.7.1.112) (AXL ONCOGENE) - HOMO SAPIENS (HUMAN), 887 aa.
kinase	kinase	kinaserecep tor
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Gly (761)	Phe (762)	Pro (763)
Asp	ren	Thr
ပ	ග	ပ
<u> </u>	<b>⊢</b>	٧.
TTCAATGTTGTAT TTGTCAATATAG[T /C]CATATAAATCTT CTGTCCCCAGAAC	TGTAAAATCGAAT ATCATAGTCTGT[T /GJAACGTCTGGTA CAATTGCTTGAAG T	TCGGCTAGGCAG CCTCCATCCTCAC [AC]CCCCTTATCA CATCCGCGTGGC ATG
1713	2096	1107
cg43917871 1713	cg43917871	cg43322545
532	533	534

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19	(19q13.1										
2			_		-			EC		<u>ā</u>	
kinaserecep Human Gene SWISSNEW-	ID:P30530 TYROSINE-PROTEIN	KINASE RECEPTOR UFO	PRECURSOR (EC 2.7.1.112) (AXL	ONCOGENE) - HOMO SAPIENS	(HUMAN), 887	aa. pcls: SWISSPROT-ID: P30530	TYROSINE-PROTEIN KINASE	RECEPTOR UFO PRECURSOR (EC	2.7.1.112) (AXL ONCOGENE) -	HOMO SAPIENS (HUMAN), 887 aa.	
kinaserecep			=			<u></u>				_	
-NON	CONSER tor	VATIVE									
Gļ	(764)										
Asp											
9											
cg43322545  2116  TTCCTCCTCTATT  A	cccecrceece	[AG]CCAGCCAGT	GTACCTGCCCACT	CAG							
2116											
cg43322545											
535											

(14q21)	6 (6p21.3)
3.90E-139 14 (14	9.10E-147 6 (6 <sub>f</sub>
Human Gene Homologous to SWISSNEW-ID:P17931 GALECTIN-3 (GALACTOSE-SPECIFIC LECTIN 3) (MAC-2 ANTIGEN) (IGE-BINDING PROTEIN) (35 KD LECTIN) (CARBOHYDRATE BINDING PROTEIN 35) (LAMININ-BINDING PROTEIN) (GALACTOSIDE-BINDING PROTEIN) (GALACTOSIDE-BINDING PROTEIN) (GALACTOSE-SPECIFIC LECTIN 3) (MAC-2 ANTIGEN) (IGE-BINDING PROTEIN) (35 KD LECTIN) (CARBOHYDRATE BINDING PROTEIN) (35 KD LECTIN) (CARBOHYDRATE BINDING PROTEIN) (LECTIN 1-29) (L-31) (GALACTOSIDE-BINDING PROTEIN) (LECTIN L-29) (L-31) (GALACTOSIDE-BINDING PROTEIN) (GALACTOSIDE-BINDING PROTEIN) (GALACTOSIDE-BINDING PROTEIN) (GALACTOSIDE-BINDING PROTEIN) (GALACTOSIDE-BINDING PROTEIN) (GALBP) - HOMO SAPIENS (HUMAN), 249 aa.	Human Gene Homologous to SWISSPROT-ID:P28068 CLASS II HISTOCOMPATIBILITY ANTIGEN, M BETA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 263 aa.
laminin	МНС
NON- CONSER VATIVE	NON- CONSER VATIVE
His (765)	Glu (766)
<u>අ</u>	Ala
<u> </u>	4
<u>0</u>	O
TCCGGGATAAGCT CCAGGTGCTCCA GTGGTAGGCGC CTGGAGGTGCCT GTCC	AAGCTTGTCATGC CTCACAGCAGTG[ C/A]GCACAAGACT GCCAGCCCAAT GGA
863	718
cg43958558	cg43966144
236	537

6 (6p21.3)	6 (6p21.3)	19	19	_
9.10E-147   6 (6	3.70E-134	1.80E-113	1.80E-113	2.30E-71
Human Gene Homologous to SWISSPROT-ID: P28068 CLASS II HISTOCOMPATIBILITY ANTIGEN, M BETA CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 263 aa.	Human Gene Homologous to SWISSPROT-ID:P06340 HLA CLASS II HISTOCOMPATIBILITY ANTIGEN, DZ ALPHA CHAIN PRECURSOR (MHC DN-ALPHA) - HOMO SAPIENS (HUMAN), 250 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	Human Gene Homologous to SPTREMBL-ID:Q95368 HLA CLASS I INHIBITORY NK RECEPTOR - HOMO SAPIENS (HUMAN), 455 aa.	misc_chann Human Gene Similar to SPTREMBL- 2.30E-71 ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.
МНС	MHC	MHC	MHC	misc_chann el
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Thr (767)	lle (768)	Ala (769)	Ala (770)	Ala (771)
<u>e</u>	Thr	Pro	Thr	Thr
ပ	<b>-</b>	ပ	o	ڻ ت
F	O ,	ပ	∢	۷
ACTTACACCTGTG TGGTAGAGCACA T/CJTGGGGCTCCT GAGCCCATCCTTC GG	GGCCTGGTGGGC TTCCTCGTGGGCA [C/T]CGTCCTCATC ATCATGGGCACAT AT	CTGAGCCCAGAG CGTTGTCTCCTGC [C/G]CATGAGCAC CACAGTCAGGCC TTGA	AGCCGGCCGGG CCCCACGGTTCG C[A/G]CAGGAGAG AACGTGACCTTGT CCTG	CCGGCTGTGCTC AGGGGTGTGGGG T[A/G]CGGATACA GAGGAGCGGCTG GTGGA
823	206	1044	424	340
cg43966144	cg42686658	cg38337333	cg38337333	cg42481172
538	539	540	541	542

8 (8p11.2)	8 (8p11.2)	17 (17q11.2 )	×	
6.10E-70	6.10E-70	0	0	1.40E-157
misc_chann Human Gene Similar to SPTREMBL- 6.10E-70 ID:P91197 SIMILAR TO LIGAND-GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	Human Gene Similar to SPTREMBL- ID:P91197 SIMILAR TO LIGAND- GATED IONIC CHANNEL PROTEIN - CAENORHABDITIS ELEGANS, 461 aa.	Human Gene SWISSPROT- ID:P20393 V-ERBA RELATED PROTEIN EAR-1 - HOMO SAPIENS (HUMAN), 614 aa.	Human Gene SWISSNEW- ID:P10275 ANDROGEN RECEPTOR - HOMO SAPIENS (HUMAN), 919 aa.jpcls:SWISSPROT-ID:P10275 ANDROGEN RECEPTOR - HOMO SAPIENS (HUMAN), 919 aa.	Human Gene TREMBLNEW- ID:G2935442 RIBONUCLEASE H1 - HOMO SAPIENS (HUMAN), 286 aa.jpcls:TREMBLNEW-ID:G2935444 RIBONUCLEASE H1 - HOMO SAPIENS (HUMAN), 286 aa.
misc_chann el	misc_chann el	nucl_recpt	nucl_recpt	nuclease
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Leu (772)	Gin (773)	Leu (774)	His (775)	Phe (776)
qrT	Lys	i E	Gin	Leu
<u> </u>	O	<u> </u>	ပ	<b>-</b>
<u>ග</u>	⋖	⋖	<u>ဖ</u>	U
GAAGATGCCCTC CTCAGACATGAGT [G/T]GAAAGGTTAT CAGAAATGGGTC CGC	AGATGCCCTCCTC AGACATGAGTGG[ A/C]AAGGTTATCA GAAATGGGTCCG CCC	GCCTCGGGCTTC CACTACGGTGTG C[A/T]CGCCTGCG AGGCTGCAAGG GCTTT	AGCGGGACGGTC CGGAGCAAGCCC A[G/C]AGGCAGAG GAGGCGACAGAG GGAAA	GTGCCGGGAGTG AGCGATGAGCTG G[C/T]TTCTGTTCC TGGCCCACAGAG TCGC
238	240	1067	89	91
cg3000465	cg3000465	cg43249083	cg44928796	cg43323772
543	544	545	546	547

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	12	12	(14
6.00E-150	1.10E-97	1.10E-97	8.90E-101 1
Human Gene Homologous to SPTREMBL-ID:Q13692 BCR/ABL FUSION PROTEIN - HOMO SAPIENS (HUMAN), 284 aa (fragment).	Human Gene Similar to SWISSPROT-ID:P01118 TRANSFORMING PROTEIN P21/K- RAS 2B - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Similar to SWISSPROT-ID:P01118 TRANSFORMING PROTEIN P21/K- RAS 2B - HOMO SAPIENS (HUMAN), 188 aa.	Human Gene Homologous to SWISSPROT-ID:P18283 GLUTATHIONE PEROXIDASE- GASTROINTESTINAL (EC 1.11.1.9) (GSHPX-GI) (GLUTATHIONE PEROXIDASE-RELATED PROTEIN 2) (GPRP) - HOMO SAPIENS (HUMAN), 190 aa.
опсодепе	oncogene	oncogene	peroxidase
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Phe (777)	Cys (778)	His (779)	Ser (780)
Cys	Gly	Gin	Cys
<b>-</b>	<b> -</b>	ပ	<b>}-</b>
o	ဖြ	⋖	<
GGCTATAATCACA ATGGGGAATGGT[ G/T]TGAAGCCCAA ACCAAAAATGGCC AA	ATATAAACTTGTG GTAGTTGGAGCT[ G/I]GTGGCGTAG GCAAGAGTGCCTT GAC	TGGATATTCTCGA CACAGCAGGTCA[ A/C]GAGGAGTACA GTGCATGAGGG ACC	CTGTTCAGGATCT A CCTCATTCTGACIA MGTTCTCCTGAT GTCCAAATTGGTT G
808	155	304	706
cg42732993	cg42904626	cg42904626	cg42691989
548	549 1.8 cm	550	551
	in the second se		

7		(11922)	
0	0	3.20E-302	2.40E-155
Human Gene TREMBLNEW-ID:G2262075 IAR/RECEPTOR-LIKE PROTEIN-TYROSINE PHOSPHATASE PRECURSOR - HOMO SAPIENS (HUMAN), 1015 aa.	Human Gene SWISSPROT- ID:P23469 PROTEIN-TYROSINE PHOSPHATASE EPSILON PRECURSOR (EC 3.1.3.48) (R-PTP- EPSILON) - HOMO SAPIENS (HUMAN), 700 aa.	Human Gene SWISSPROT- ID:P54613 PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, BETA ISOFORM (PROTEIN PHOSPHATASE PP2A SUBUNIT A, BETA ISOFORM) (P65-BETA) - SUS SCROFA (PIG), 602 aa (fragment).	phosphoryla Human Gene SWISSPROT- ID:P00491 PURINE NUCLEOSIDE PHOSPHORYLASE (EC 2.4.2.1) (INOSINE PHOSPHORYLASE) (PNP) - HOMO SAPIENS (HUMAN), 289 aa.
phosphatas e	phosphatas e	phosphatas e	phosphoryla se
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Pro (781)	Glu (782)	Thr (783)	Ser (784)
Ser	<b>Š</b> iō	<u>e</u>	Oly Oly
<u>o</u>	<b>-</b>	<u>ග</u>	-
⋖	U	⋖	ပ
AGGTCCTCGCGG AGCTGGGTCCGG G[AG]CCCGGGAG GGTAGGTCAGCG CAGAC	CTGGCGCACTACT CGGACCTGCTCC[ C/TJCCTGGCGGG CCTGGGGCTGAT TGAG	GCACAAGGAACG GAATTGCTGTCTG [A/G]TTTCTGCTTT AACAGCATTTGAT GC	CTTCGGGGAAAG TTGGGGATTTCAC [C/T]GTAGTCAAAG ATCTGGGCCTGA GTT
4096	368	3187	1330
cg43917453	cg43947363	cg43928335	cg43996195
552	553	554	555

(19q13.3)	6 (6p12)
0	0
Human Gene SWISSNEW- ID:P28340 DNA POLYMERASE DELTA CATALYTIC CHAIN (EC 2.7.7.7) - HOMO SAPIENS (HUMAN), 1107 aa ipcls:SWISSPROT-ID:P28340 DNA POLYMERASE DELTA CATALYTIC CHAIN (EC 2.7.7.7) - HOMO SAPIENS (HUMAN), 1107 aa.	polymerase Human Gene SWISSNEW- ID:P25205 DNA REPLICATION LICENSING FACTOR MCM3 (DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1) (RLF BETA SUBUNIT) (P102 PROTEIN) - HOMO SAPIENS (HUMAN), 808 aa. pcls:SWISSPROT-ID:P25205 DNA REPLICATION LICENSING FACTOR MCM3 (DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1) (RLF BETA SUBUNIT) (P102 PROTEIN) - HOMO SAPIENS (HUMAN), 808 aa.
polymerase	polymerase
NON- CONSER VATIVE	CONSER VATIVE
Arg (785)	Gly (786)
<u>т</u>	Arg
O	ပ
۷	O
AGGTCCTCCTCGA A ATTGGGATGGCC[ A/GJAGGTGCATCA TCATCCCAGA GG	CTCAGACCATGTC C CTTCGGATGCAC[ C/GJGTTACAGAGC ACCTGGGGAGCA GGA
3340	1593
cg44022214	cg43958858
556	557

12 (12p13)	12 (12p13)	12 (12p13)	11(1)
0	0	0	2.40E-59
Human Gene SWISSPROT- ID:P22460 VOLTAGE-GATED POTASSIUM CHANNEL PROTEIN KV1.5 (HK2) (HPCN1) - HOMO SAPIENS (HUMAN), 613 aa.	Human Gene SWISSPROT- ID:P22460 VOLTAGE-GATED POTASSIUM CHANNEL PROTEIN KV1.5 (HK2) (HPCN1) - HOMO SAPIENS (HUMAN), 613 aa.	Human Gene SWISSPROT- ID:P22460 VOLTAGE-GATED POTASSIUM CHANNEL PROTEIN KV1.5 (HK2) (HPCN1) - HOMO SAPIENS (HUMAN), 613 aa.	Human Gene Similar to SWISSPROT-ID:P50280 MATRILYSIN PRECURSOR (EC 3.4.24.23) (PUMP-1 PROTEASE) (UTERINE METALLOPROTEINASE) (MATRIX METALLOPROTEINASE- 7) (MMP-7) (MATRIN) - RATTUS NORVEGICUS (RAT), 267 aa.
potassium_ channel	potassium_ channel	potassium_ channel	protease
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Leu (787)	Gly (788)	Ala (789)	His (790)
Gin	Arg	о О	Asp
<u> </u>	<u>ග</u>	<u>ග</u>	ပ
4	O	O	O
CGCTTTGAGACG CAGCTGGGCACC C[AT]GGCGCAGT TCCCCAACACACT CCTG	GGGGGACGAGGC CATGGAGCGCTT C[C/G]GCGAGGAT GAGGGCTTCATTA AAGA	CATTAAAGAAGAG GAGAAGCCCCTG[ C/G]CCCGCAACG AGTTCCAGCGCC	TGGAGGGGATGC TCATTTTGATGAA[ G/CJATGAAAGGTG GACCAACAATTTC AG
641	898	910	868
cg42534568	cg42534568	cg42534568	cg43154190
558	559	560	561

(11922)	6 (6pter)	19
2.40E-59	1.60E-124   6 (6pter)	0
Human Gene Similar to SWISSPROT-ID:P50280 MATRILYSIN PRECURSOR (EC 3.4.24.23) (PUMP-1 PROTEASE) (UTERINE METALLOPROTEINASE) (MATRIX METALLOPROTEINASE- 7) (MMP-7) (MATRIN) - RATTUS NORVEGICUS (RAT), 267 aa.	Human Gene Homologous to SWISSPROT-ID:P16083 NAD(P)H DEHYDROGENASE (QUINONE) 2 (EC 1.6.99.2) (QUINONE REDUCTASE) (DT-DIAPHORASE) (AZOREDUCTASE) (PHYLLOQUINONE REDUCTASE) (MENADIONE REDUCTASE) - HOMO SAPIENS (HUMAN), 231 aa.	Human Gene TREMBLNEW- ID:G2725625 ACETOLACTATE SYNTHASE - HOMO SAPIENS (HUMAN), 632 aa.
protease	reductase	synthase
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Thr (791)	Cys (792)	Glu (793)
Arg	Áig Ö	Gly
U	<b> -</b>	<b>L</b>
ပ	ပ	ပ
GATGAAAGGTGG ACCAACAATTTCA[ G/CJAGAGTACAAC TTACATCGTGTTG CG	ATTCTACGATTCC GGTTTGCTCCAG[ G/T]GTAAACTAGC GCTCCTTTCCGTA AC	CGCTGCCTTCTCC CGAAAGGTCTGC[ C/TJCCTTCACGCG TTCGGCTTCCCGC AG
923	694	1081
cg43154190	cg43927549	cg43325541
562	563	564

7.40E-65	7.40E-65
Human Gene Similar to SWISSNEW- 7.40E-65 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa. pols:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.	Human Gene Similar to SWISSNEW- 7.40E-65 ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa. pcls:SWISSPROT-ID:P39062 ACETYL-COENZYME A SYNTHETASE (EC 6.2.1.1) (ACETATECOA LIGASE) (ACYL-ACTIVATING ENZYME) (ACETYL-COA SYNTHASE) - BACILLUS SUBTILIS, 572 aa.
synthase	synthase
NON- CONSER VATIVE	NON- CONSER VATIVE
(794)	Thr (795)
Ser	Ala
H	⋖
O	O
GTGAAGGCATTTG TGGTCCTGGCCT[ C/TJGCAGTTCCTG TCCCATGACCCAG AA	GACTGTCACAGG GAAAATTCAACGA [G/A]CCAAGCTTC GAGACAAGGAGT GGAA
1474	1617
cg43064068	cg43064068
565	999

		<del></del>	
2 (2pz/1)	2 (2p21)	8 (8p21)	5 (5q35.1)
0	0	1.60E-252	8.30E-240   5 (5
Human Gene SWISSPROT- ID:P23945 FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R) (FOLLITROPIN RECEPTOR) - HOMO SAPIENS (HUMAN), 695 aa.	Human Gene SWISSPROT- ID:P23945 FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R) (FOLLITROPIN RECEPTOR) - HOMO SAPIENS (HUMAN), 695 aa.	Human Gene SWISSPROT- ID:P35348 ALPHA-1A ADRENERGIC RECEPTOR (ALPHA 1A-ADRENOCEPTOR) (ALPHA-1C ADRENERGIC RECEPTOR) - HOMO SAPIENS (HUMAN), 466 aa.	Human Gene SWISSPROT- ID:P21728 D(1A) DOPAMINE RECEPTOR - HOMO SAPIENS (HUMAN), 446 aa.
tm7	tm7	tm7	tm7
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Ala (796)	Thr (797)	Cys (798)	Met (799)
Th.	Asn	Arg	<u>e</u>
O	O		ڻ و
⋖	⋖	U	ပ
GCAAGAAGTTGAT A TATATGACTCAG(A /G]CTAGGGGTCA GAGATCCTCTCTG GC	AAGGCCAACAAC CTGCTCTACATCAI AVCJCCCTGAGGC CTTCCAGAACCTT CCC	GAATGTCTTGAGA ATCCAGTGTCTC[ C/T]GCAGAAAGCA GTCTTCCAAACAT GC	TCTCTCTGGAGAA GATCCAACCCATI C/GJACACAAAACG GTCAGCACCCAA CCT
1119	535	1475	1590
cg36988276 1119	cg36988276	cg32296848	cg2524739
567	568	569	570

				3 (3q25)
8.50E-199	1.40E-196	2.50E-160	2.10E-67	2.20E-207
Human Gene SWISSPROT- ID:P04001 GREEN-SENSITIVE OPSIN (GREEN CONE PHOTORECEPTOR PIGMENT) - HOMO SAPIENS (HUMAN), 364 aa.	Human Gene TREMBLNEW- ID:G2736282 G PROTEIN COUPLED RECEPTOR - HOMO SAPIENS (HUMAN), 362 aa.	Human Gene TREMBLNEW- ID:E1246031 OLFACTORY RECEPTOR - HOMO SAPIENS (HUMAN), 312 aa.	Human Gene Similar to SWISSPROT-ID:P30975 TACHYKININ-LIKE PEPTIDES RECEPTOR 99D (DTKR) - DROSOPHILA MELANOGASTER (FRUIT FLY), 519 aa.	Human Gene SWISSPROT- ID:P26022 PENTAXIN-RELATED PROTEIN PTX3 PRECURSOR (TUMOR NECROSIS FACTOR- INDUCIBLE PROTEIN TSG-14) - HOMO SAPIENS (HUMAN), 381 aa.
tm7	tm7	tm7	tm7	tnf
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
(800)	Gly (801)	Ser (802)	Thr (803)	Leu (804)
Ţ	Ser	Phe	<u>=</u>	Met
<u> </u>	<u>ග</u>	U	U .	<b>-</b>
U	⋖	<b> </b>	<b>—</b>	⋖
AGTGTCTGGATGA TCTTTGTGGTCA[C //IJTGCATCCGTTT TCACAAATGGGCT T	CATCTTCTCCATC AACCTCTTCAGC[ A/G]GCATTTTCTT CCTCACGTGCATG	TCTTTTGTGGACA TCTGCTTCTCCT[T /C]CACCACCGTCC CCAAGATGCTGG CC	GGCCCTGAGAGC AACACCACGGGC A[T/C]CACAGCCTT CTCCATGCCCAG CTGG	TGGAAGCGTGCA TCCAGTGAGACCA [A/T]TGAGGCTTGA GTCTTTTAGTGCC TG
394	519	285	89	688
cg2320320	cg43264978	cg3003708	cg38841806	cg43336100
571	572	573	574	575

		19 19p13.3	2
2.30E-55 8	0	4.30E-275   19   (16   )	1.70E-177   12
Human Gene Similar to TREMBLNEW-ID:G2653845 TNF RECEPTOR-RELATED RECEPTOR FOR TRAIL - HOMO SAPIENS (HUMAN), 386 aa.	TORY - HOMO	transcriptfac Human Gene SWISSPROT- ID:P35269 TRANSCRIPTION INITIATION FACTOR IIF, ALPHA SUBUNIT (TFIIF-ALPHA) (TRANSCRIPTION INITIATION FACTOR RAP74) - HOMO SAPIENS (HUMAN), 517 aa.	transcriptfac Human Gene SPTREMBL- ID:Q07279 TRANSCRIPTION FACTOR NF-E2 - MUS MUSCULUS (MOUSE), 373 aa.
tnfreceptor	transcriptfac tor	transcriptfac tor	transcriptfac tor
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Pro (805)	His (806)	Phe (807)	Leu (808)
ren	Tyr	ren	Phe
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<b>⊢</b>	<b>4</b>	U	ပ
GAGGCGCGGGGA GCCAGGCCTGGG C[T/C]CCGGGTCC CCAAGACCCTTGT GCTC	ACTCGCACGTGG ATCCTGAGGCTGT [A/G]AGAGGTAAG GAAGGCTTTGCCA	CATTGACAGCGA GGCCTCCTCAGC C[C/T]TCTTCATGG CGAAGAAGAAGA CGCC	TGACAGAGCTGTA C CCGTGACATTTT[C /G]CAGCACCTTCG GGATGAATCAGG CA
234	2857	1285	1346
cg43335562	cg43140548 2857	cg43011561	cg43998970
576	577	578	579

<b>5</b> (3)	-
<u>o</u>	
6.50E-192 9 (sq3	
transferase Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (NAGAT) - HOMO SAPIENS (HUMAN), 354 aa.	
transferase	
NON- CONSER VATIVE	
(809)	
Pro	
<b>-</b>	
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CACTACTATGTCT C TCACCGACCAGC[ C/TJGGCCGCGGT GCCCCGCGTGAC GCTG	
464	
cg2537639	
280	

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6.50E-192 9 (945															
transferase   Human Gene SWISSPROT-	ID:P16442	FUCOSYLGLYCOPROTEIN ALPHA-	- <del>Z</del>	ACETYLGALACTOSAMINYLTRANS	FERASE (EC 2.4.1.40) (HISTO-	BLOOD GROUP A TRANSFERASE)	(A TRANSFERASE) /	FUCOSYLGLYCOPROTEIN 3-	ALPHA-	GALACTOSYLTRANSFERASE (EC	2.4.1.37) (HISTO-BLOOD GROUP B	TRANSFERASE) (B	TRANSFERASE) (NAGAT) - HOMO	SAPIENS (HUMAN), 354 aa.	
transferase															
-NON	(810) CONSER	VATIVE													
<u>Gl</u>	(810)	•							-	_					
Arg	,		_					_							
9															
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TCGGCAGCTGTC C	AGTGCTGGAGGT	G[C/G]GCGCCTAC	AAGCGCTGGCAG	GACGT											
523									-		-				
cg2537639	)														
581									•						

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transferase   Human Gene SWISSPROT.	ID:P16442	FUCOSYLGLYCOPROTEIN ALPHA-	ż	<b>ACETYLGALACTOSAMINYLTRANS</b>	FERASE (EC 2.4.1.40) (HISTO-	<b>BLOOD GROUP A TRANSFERASE)</b>	(A TRANSFERASE) /	FUCOSYLGLYCOPROTEIN 3-	ALPHA-	GALACTOSYLTRANSFERASE (EC	2.4.1.37) (HISTO-BLOOD GROUP B	TRANSFERASE) (B	TRANSFERASE) (NAGAT) - HOMO	SAPIENS (HUMAN), 354 aa.	
transferase			-					_							
-NON-						-									
<u>e</u>	(811)	· 													
Phe	<u> </u>														
A															
<u> </u>	,														:
GGTGTGCGTGGA	CGTGGACATGGA	G[T/A]TCCGCGAC	CACGTGGGCGTG	GAGAT											
643															
cq2537639 643	)														
582				<u></u>											

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o6) 6	
6.50E-192 9 (9q34)	
transferase Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (B SAPIENS (HUMAN), 354 aa.	
transferase	
NON- CONSER VATIVE	
(812)	
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TCCGCTGTTCGG G CACCCTGCACCC C[G/A]GCTTCTAC GGAAGCAGCCGG GAGGC	
700	
cg2537639 700	
383	

	6.50E-192  9 (9q34)															
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	192															
	0E-1															
	6.5															 
	transferase Human Gene SWISSPROT-	ID:P16442	FUCOSYLGLYCOPROTEIN ALPHA-	Ż	ACETYLGALACTOSAMINYLTRANS	FERASE (EC 2.4.1.40) (HISTO-	BLOOD GROUP A TRANSFERASE)	(A TRANSFERASE) /	FUCOSYLGLYCOPROTEIN 3-	ALPHA-	GALACTOSYLTRANSFERASE (EC	2.4.1.37) (HISTO-BLOOD GROUP B	TRANSFERASE) (B	TRANSFERASE) (NAGAT) - HOMO	SAPIENS (HUMAN), 354 aa.	
	transferase															
	NON-	CONSER	VATIVE													
	Met	(813)														
	Fen															
	⋖												-			 
	O															
	CAAGGACGAGGG C	CGATTTCTACTAC	C/AJTGGGGGGGT	TCTTCGGGGGGT	CGGT										-	
	793															
	cg2537639															_
	584										<u>,-</u>					

(hccb6) 6	15	3 (3p25)
6.50E-192 9 (9q34)	0	0
Human Gene SWISSPROT- ID:P16442 FUCOSYLGLYCOPROTEIN ALPHA- N- ACETYLGALACTOSAMINYLTRANS FERASE (EC 2.4.1.40) (HISTO- BLOOD GROUP A TRANSFERASE) (A TRANSFERASE) / FUCOSYLGLYCOPROTEIN 3- ALPHA- GALACTOSYLTRANSFERASE (EC 2.4.1.37) (HISTO-BLOOD GROUP B TRANSFERASE) (B TRANSFERASE) (B TRANSFERASE) (B SAPIENS (HUMAN), 354 aa.	Human Gene SWISSPROT- ID:Q04671 P PROTEIN (MELANOCYTE-SPECIFIC TRANSPORTER PROTEIN) - HOMO SAPIENS (HUMAN), 838 aa.	Human Gene SWISSPROT- ID:P31641 SODIUM- AND CHLORIDE-DEPENDENT TAURINE TRANSPORTER - HOMO SAPIENS (HUMAN), 620 aa.
transferase	transport	transport
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Met (814)	Asp (815)	Met (816)
Na l	Ala	<u>e</u>
₹	<b>⋖</b>	<u>o</u>
O	U	U
GTTCTTCGGGGG GTCGGTGCAAGA G[G/A]TGCAGCGG CTCACCAGGGCC TGCCA	CACATCGTGGTG GAGCTGACCCAG G[C/A]TGACGCTTT GGGCTCCAGGTG GCGG	GTCTGAAAGATTT CCACAAGGACAT[ C/G]CTGAAGCCCT CACCAGGGAAGA GCC
826	3249	427
og2537639	cg42742340 3249	cg41653463
585	586	587

5 (5p15.3)	5 (5p15.3)	16	17	10 (10q25)
0	0	0	0	0
Human Gene SWISSPROT- ID:Q01959 SODIUM-DEPENDENT DOPAMINE TRANSPORTER (DA TRANSPORTER) (DAT) - HOMO SAPIENS (HUMAN), 620 aa.	Human Gene SWISSPROT- ID:Q01959 SODIUM-DEPENDENT DOPAMINE TRANSPORTER (DA TRANSPORTER) (DAT) - HOMO SAPIENS (HUMAN), 620 aa.	Human Gene SPTREMBL- ACC:Q16084 P130 - HOMO SAPIENS (HUMAN), 1139 aa.	Human Gene SWISSPROT- ACC:P42694 HYPOTHETICAL PROTEIN KIAA0054 - Homo sapiens (Human), 1942 aa.	Human Gene SWISSNEW- ACC:P46013 ANTIGEN KI-67 - Homo sapiens (Human), 3256 aa.
transport	transport	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI FIED
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
His (817)	Ser (818)	Pro (819)	Arg (820)	Тгр (821)
Asp	Phe	Ala	A Ö	Leu
O	U	o	ڻ و	O
တ	<b> </b>	O	ပ	<b>⊢</b>
CAAGTTCACCAAC G AACTGCTACAGG[ G/CJACGCGATTGT CACCACCTCCATC AA	TCCTCCGGCTTCG TCGTCTTCTCT[T /CJCCTGGGGTACA TGGCACAGAAGC AC	CTGCGGTAGCTG TCCCAGGCCTCG G[C/G]CCGCGCCG CCTCGTCCATGTT GAGG	GCATAGGACATG GCGGGCTTGCCC C[C/G]CGCAGAGC TCTGGGGGCTAC	CAACCCCTAGAAG ACCTGGCTGGCT[ T/GJGAAAGAGCTC TTCCAGACACCAG TA
1165	1232	4776	522	4604
cg40351913	cg40351913	cg43955093 4776	cg43055918	cg43968854
588	589	290	591	592

4 (4q22)				
0	0	0	0	0
Human Gene SWISSPROT- ACC:P55157 MICROSOMAL TRIGLYCERIDE TRANSFER PROTEIN, LARGE SUBUNIT PRECURSOR - Homo sapiens (Human), 894 aa.	Human Gene SPTREMBL- ACC:Q15840 ZINC FINGER PROTEIN BASONUCLIN - HOMO SAPIENS (HUMAN), 994 aa.	Human Gene SPTREMBL- ACC:Q15840 ZINC FINGER PROTEIN BASONUCLIN - HOMO SAPIENS (HUMAN), 994 aa.	Human Gene SPTREMBL- ACC:Q15840 ZINC FINGER PROTEIN BASONUCLIN - HOMO SAPIENS (HUMAN), 994 aa.	Human Gene SPTREMBL- ACC:Q15840 ZINC FINGER PROTEIN BASONUCLIN - HOMO SAPIENS (HUMAN), 994 aa.
UNCLASSI FIED	UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Leu (822)	His (823)	Cys (824)	Tyr (825)	lle (826)
Phe	uio Uio	Ser	Asn	Asn
O	<b>-</b>	<u> </u>	<b>-</b>	<b>-</b>
<b>—</b>	<u>o</u>	∢	∢	⋖
CCATTGTTCAAGA CATCCTACGTTIT /GJGAAATGCCTGC AAGCAAAATTGTC C	ACAATTCAGAGAG GGAGACTGAGCA G/TJACACCAGCAT TGATCATGGTGCC AA	ATCAGGAAAGGT GTTGGATCACTGG [AT]GCATCATGAC CAGTGAGGAAGA AGT	CCCCAAACAGGA AGTCCATGGGCC C[A/T]ACCCTGACA GCAGCTTCTTAAC TTC	CCCAAACAGGAA GTCCATGGGCCC A[A/T]CCCTGACA GCAGCTTCTTAAC TTCC
1841	2001	553	937	938
cg43070241	cg43262121	cg43262121	cg43262121	cg43262121
593	594	595	596	597

	6 (6q14)	<b>•</b>		2 (2cen)
0	9.1e-313	2.00E-301	6.10E-236	3.00E-227 2 (2cen)
Human Gene SWISSPROT- ACC:P02771 ALPHA- FETOPROTEIN PRECURSOR (ALPHA-FETOGLOBULIN) (ALPHA- 1- FETOPROTEIN) - Homo sapiens (Human), 609 aa.	Human Gene SWISSPROT- ACC:P21589 5'-NUCLEOTIDASE PRECURSOR (EC 3.1.3.5) (ECTO- NUCLEOTIDASE) (5'-NT) (CD73 ANTIGEN) - Homo sapiens (Human), 574 aa.	Human Gene SWISSNEW- ACC:P42568 AF-9 PROTEIN - Homo sapiens (Human), 568 aa.	Human Gene SWISSNEW- ACC:043913 ORIGIN RECOGNITION COMPLEX SUBUNIT 5 - Homo sapiens (Human), 435 aa.	Human Gene SWISSPROT- ACC:P09529 INHIBIN BETA B CHAIN PRECURSOR (ACTIVIN BETA-B CHAIN) - Homo sapiens (Human), 407 aa.
UNCLASSI FIED	UNCLASSI FIED	UNCLASSI	UNCLASSI	UNCLASSI FIED
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Gly (827)	Thr (828)	Ser (829)	Arg (830)	Ala (831)
Glu	Ala	Ala	Gly	Ser
<u>o</u>	∢	<b></b>	⋖	ပ
<b>d</b>	<b>ഗ</b>	ပ	ပ	∢
CTGGAAGAACTTT GCCATGAGAAAG[ A/G]AATTTGGAG AAGTACGGACATT CA	AATGATTAACAAC AACCTGAGACACI G/AJCGGATGAAAT GTTCTGGAACCAC GT	GCCCCAGGCAT GGCTAGCTCGTG T[G/T]CCGTGCAG GTGAAGCTGGAG CTGGG	CAGCTTTCCATCC ATTTTATTAT[G/ AJGACATACTGCT AGTGGAAAGACCT A	CAGGTGTCCTGC GAGCCACCCGGG G[A/C]TCCGGGTG GCGGGGGTGGCG GCGGGGTGGCG
501	1235	367	223	3034
cg44024279	cg44928804	cg43317253	cg41637661	cg42913861
298	599	009	601	602

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15		15
1.40E-188 15	4.20E-150	3.70E-142
UNCLASSI Human Gene SWISSPROT- ACC:P09471 GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 1 - Homo sapiens (Human), 353 aa.	UNCLASSI Human Gene Homologous to SWISSPROT-ACC:P14207 FOLATE RECEPTOR BETA PRECURSOR (FR-BETA) (FOLATE RECEPTOR 2) (FOLATE RECEPTOR, FETAL/PLACENTAL) (PLACENTAL FOLATE-BINDING PROTEIN) (FBP) - Homo sapiens (Human), 255 aa.	Human Gene Homologous to SWISSPROT-ACC:P21583 STEM CELL FACTOR PRECURSOR (SCF) (MAST CELL GROWTH FACTOR) (MGF) (C-KIT LIGAND) - Homo sapiens (Human), 273 aa.
UNCLASSI FIED	UNCLASSI	UNCLASSI FIED
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Gly (832)	Arg (833)	Gly (834)
Ser	Ser	Arg
<u>o</u>	O	ပ
∢	⋖	<b>4</b>
AGAGGAGAGAGC CGCCTCGAGCG G[A/G]GCAAGGCG ATTGAGAAAACC TCAA	GCCAGAGTTGCA GCATCAGGGCCA G[AC]CTGAGCAG GAGCCCCCAGT CCCAT	TAGGAATGACAGC A AGTAGCAGTAAT! A/GJGGAAGGCCA AAAATCCCCCTGG AGA
526	335	787
cg43249389	cg43919239	cg41642952 787
603	604	605

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1.60E-134	1.60E-116	2.20E-98 (	2.90E-87 3
Human Gene Homologous to SWISSNEW-ACC:P08637 LOW AFFINITY IMMUNOGLOBULIN GAMMA FC RECEPTOR III-1 PRECURSOR (FC- GAMMA RIII) (FCRIII) (IGG FC RECEPTOR III-1) (FC-GAMMA RIII-ALPHA) (CD16) (FCR-10) - Homo sapiens (Human),	Human Gene Homologous to SWISSPROT-ACC:P50539 MAX INTERACTING PROTEIN 1 (MXI1 PROTEIN) - Homo sapiens (Human), 228 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD38008 GLYOXALASE-I (EC 4.4.1.5) - HOMO SAPIENS (HUMAN), 184 aa.	Human Gene Similar to SWISSPROT-ACC:P49913 ANTIBACTERIAL PROTEIN FALL-39 PRECURSOR (FALL-39 PEPTIDE ANTIBIOTIC) (ANTIMICROBIAL PROTEIN CAP-18) (LL-37) - Homo sapiens (Human), 170 aa.
UNCLASSI FIED	UNCLASSI	UNCLASSI FIED	UNCLASSI
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Ser (835)	??? (836)	Ala (837)	Asn (838)
Arg	Ser	n Gln	Th.
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TGTTCCTGGAGCC G TCAATGGTACAG( G/G)GTGCTCGAG AAGGACAGTGTG ACTC	GGGCACAGAAAC ACAGCAGCGGGA G[C/S]AGCAACAC CAGCACTGCCAA	ATTGCCATTGTGG TAACTCTGGGTC[ T/G]CATCATCTTC AGTGCCCCAATTG TG	GTGAAGCGGTGT ATGGGGACAGTG A[C/A]CCTCAACCA GGCCAGGGGCTC CTTT
221	391	1609	521
cg43945147	cg43926002	cg43972311	cg42556108
909	607	809	609

)				14 14q11.2
 2.30E-85	2.80E-73 4	.90E-64	.90E-64	1.00E-59 14 (14
Human Gene Similar to SWISSPROT-ACC:P01282 VASOACTIVE INTESTINAL PEPTIDE PRECURSOR (VIP) - Homo sapiens (Human), 170 aa.	Human Gene Similar to SPTREMBL- 2.80E-73 ACC:Q94218 CODED FOR BY C. ELEGANS CDNA CM10H5 - CAENORHABDITIS ELEGANS, 589 aa.	Human Gene Similar to SPTREMBL- 5.90E-64 ACC:O76087 GAGE-8 - HOMO SAPIENS (HUMAN), 117 aa.	Human Gene Similar to SPTREMBL- 5.90E-64 ACC:O76087 GAGE-8 - HOMO SAPIENS (HUMAN), 117 aa.	Human Gene Similar to REMTREMBL-ACC:G238693 T CELL RECEPTOR VARIABLE ALPHA CHAIN - HOMO SAPIENS (HUMAN), 143 aa (fragment).
UNCLASSI FIED	UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Pro (839)	Phe (840)	(841)	Val (842)	Arg (843)
<u>G</u>	Vai	Met	Met	Gly
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۷	ပ	⋖	⋖	O
AGTGACTTCAGTA AACTCTTGGGTC  A/CJACTTTCTGCC AAAAAGTACCTTG AG	CGGTATAACGTCA AAAATCCTGTTT[G //I]TCAGCCAAGGT TCAGAAATTGCCT C	AAGGCGCTATGTA A CAGCCTCCTGAA[ A/GJTGATTGGGCC TATGCGGCCCGA GCA	TGAAGATGGTCCT GATGGGCAGGAG[ A/G]TGGACCCGC CAAATCCAGAGGA GGT	ATTACTGAAGGGT GGAGAACAGAAG[ G/CJGTCATGAAAA AATATCTGCTTCA TT
487	1052	283	505	260
cg36842490	cg43942549	cg42381630	cg42381630	cg3004395
610	611	612	613	614

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1.20E-58	1.60E-54	1.60E-54	1.60E-54	1.60E-54
Human Gene Similar to SWISSNEW- 1.20E-58 ACC:076070 GAMMA-SYNUCLEIN (PERSYN) (BREAST CANCER- SPECIFIC GENE 1 PROTEIN) - Homo sapiens (Human), 127 aa.	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).	Human Gene Similar to REMTREMBL-ACC:G33509 T CELL RECEPTOR - HOMO SAPIENS (HUMAN), 118 aa (fragment).
UNCLASSI FIED	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI FIED
NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE	NON- CONSER VATIVE
Glu (844)	Gln (845)	Met (846)	Gin (847)	Ser (848)
\all	nen	Val	ren	Phe
<u> </u>	⋖	⋖	<	O
<b>4</b>	F	ပ	<b>⊢</b>	<b>L</b>
CACTTCCTCTTTC TCTTTGGATGCC[ ATJCACCCTCCTG TTGGGGGGCAGA TGG	GAAGACAAGGTG GTACAAAGCCCTC [T/A]ATCTCTGGTT GTCCACGAGGGA GAC	TGTAACTCTCAAT TGCAGTTATGAA[ G/A]TGACTAACTT TCGAAGCCTACTA	GAAGTGACTAACT TTCGAAGCCTAC[ T/A]ATGGTACAAG CAGGAAAAGAAA GCT	AGCATATTAGATA AGAAAGAACTTIIT ICJCAGCATCCTGA ACATCACAGCCAC C
733	589	342	364	475
cg43960645	cg2526759	cg2526759	cg2526759	cg2526759
615	616	617	618	619

17 (17q21.3 2)	17 (17q21.3 2)	
0	0	1.80E-157
Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSPROT- ID:P08514 PLATELET MEMBRANE GLYCOPROTEIN IIB PRECURSOR (GPIIB) (INTEGRIN ALPHA- IIB) (CD41) - HOMO SAPIENS (HUMAN), 1039 aa.	Human Gene SWISSNEW- ID:Q08722 LEUKOCYTE SURFACE ANTIGEN CD47 PRECURSOR (ANTIGENIC SURFACE DETERMINANT PROTEIN OA3) (INTEGRIN ASSOCIATED PROTEIN) (IAP) (MER6) - HOMO SAPIENS (HUMAN), 323 aa. pcls:SWISSPROT-ID:Q08722 LEUKOCYTE SURFACE ANTIGEN CD47 PRECURSOR (ANTIGENIC SURFACE DETERMINANT PROTEIN OA3) (INTEGRIN ASSOCIATED PROTEIN) (IAP) (MER6) - HOMO SAPIENS (HUMAN), 323 aa.
cadherin	cadherin	cadherin
FRAMES	FRAMES	FRAMES
His (849)	His (850)	Glu (851)
Thr	<b>С</b>	Arg
U	∢	G e G
gap	g d d	p
TACAGAATATGTC GTCGGTGCCCCC[ gap/C]ACTTGGAG CTGGACCCTGGG AGCGG	GTCGGCTTCTTCA AGCGGAACCGGC[ gap/A]CACCCCTG GAAGAAGATGATG AAGA	GTCCATCACTTCA CTTCAGTTATTC[T/ gap]CCTAGGAGGT TGTATAGTCTTCT GA
1067	3285	2521
cg40310734	cg40310734	cg43956660
620	621	622

2	17	17	11 11 11 11 11 11 11 11 11 11 11 11 11	15 (15q15)
0	0	0	1.80E-203 11 (11	0
Human Gene SWISSPROT- ID:P12111 COLLAGEN ALPHA 3(VI) CHAIN PRECURSOR - HOMO SAPIENS (HUMAN), 3176 aa.	Human Gene SPTREMBL- ID:Q92804 PUTATIVE RNA BINDING PROTEIN RBP56 - HOMO SAPIENS (HUMAN), 592 aa.	Human Gene SPTREMBL- ID:Q92804 PUTATIVE RNA BINDING PROTEIN RBP56 - HOMO SAPIENS (HUMAN), 592 aa.	Human Gene SWISSNEW- ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.jpcls:SWISSPROT-ID:P06727 APOLIPOPROTEIN A-IV PRECURSOR (APO-AIV) - HOMO SAPIENS (HUMAN), 396 aa.	glycoprotein Human Gene SWISSPROT- ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.
collagen	dna_rna_bi nd	dna_ma_bi nd	- de	glycoprotein
FRAMES	FRAMES	FRAMES	FRAMES HIFT	FRAMES HIFT
Gly (852)	Arg (853)	Leu (854)	Asp (855)	Asn (856)
Gly	Arg	Tyr	Thr	Thr
ڻ ص	<u>ن</u>	υ	ပ	∢
deb	gap	gap	gap	gap
CTCCAGGGATAGT TGGACAGAAGGG[ gap/GJAGACCCTG GCTACCCAGGAC CAGCT	GCTATGGAGGCA AAATGGGAGGAA G[gap/G]AAACGAC TACAGAAATGATC AGCGC	CGGTTACTCCAGT TATGGACAAAGT[g ap/C]TATTCACAGT CCTATGGTGGTTA TG	GGCCGAGCAGCT GCGCCCAGCT G[gap/G]ACCCCCT ACGCACAGCGCA TGGAGA	CAGACTTCCACAG AGTGCTGGATGA[ gap/A]CGCGGCCT GCCTTGCCCCAG GGTTA
2429	1837	263	584	1553
cg43970982	cg42175288	cg42175288	cg41554010	cg43065549
623	624	625	626	627

14 (14q11.2			
14(146)	2	ဖ	20
9.90E-70	1.20E-224	1.40E-261	9.60E-262 20
glycoprotein Human Gene Similar to SWISSPROT-ID:P16452 ERYTHROCYTE MEMBRANE PROTEIN BAND 4.2 (P4.2) (PALLIDIN) - HOMO SAPIENS (HUMAN), 690 aa.	Human Gene SWISSPROT- ID:P50219 HOMEOBOX PROTEIN HB9 - HOMO SAPIENS (HUMAN), 401 aa.	Human Gene SWISSPROT- ID:P15260 INTERFERON-GAMMA RECEPTOR ALPHA CHAIN PRECURSOR (CDW119) - HOMO SAPIENS (HUMAN), 489 aa.	Human Gene SPTREMBL- ID:Q15802 SERINE/THREONINE PROTEIN KINASE KRS-2 - HOMO SAPIENS (HUMAN), 487 aa.
glycoprotein	FRAMES homeobox HIFT	interferon	kinase
FRAMES	FRAMES	FRAMES	FRAMES
Leu (857)	Arg (858)	End (859)	His (860)
Leu	Pro	Leu	<u>e</u>
O	<u>ග</u>	gap	U
gap	gap	∢	gap
TGACCACGGGGT GCTGGATGCCTG C[gap/C]TTATACAT CCTGGACCGGCG GGGGA	GCGCCGCGAGAC gap AAGGGCAGCGGA C[gap/G]CGCCTGC GGACTTGAGGGA CAGTGA	ATAAGTTACAATG CTTTTTTGTTT[A/ gap]AAAAAAAAAA AAAGTCTGTACTT TA	CTGTGGGGCTGG TTCTGTATCTGAT[ gap/C]ATCATTCGA TTACGAAATAAAA CGT
666	1220	364	379
cg41568631	cg41637704	cg43933380	cg43072541 379
628	629	630	631

2 (29-13)	19	<u>€</u>	1 (1p33)
2.40E-82 [2 (2q13)	9.70E-214	9.70E-214	0
Human Gene Similar to SWISSPROT-ID:P25155 COAGULATION FACTOR X PRECURSOR (EC 3.4.21.6) (STUART FACTOR) (VIRUS ACTIVATING PROTEASE) (VAP) - GALLUS GALLUS (CHICKEN), 475 aa.	Human Gene SWISSPROT- ID:P01137 TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1) - HOMO SAPIENS (HUMAN), 390 aa.	Human Gene SWISSPROT- ID:P01137 TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1) - HOMO SAPIENS (HUMAN), 390 aa.	Human Gene SWISSPROT- ID:Q03167 TGF-BETA RECEPTOR TYPE III PRECURSOR (TGFR-3) (BETAGLYCAN) - HOMO SAPIENS (HUMAN), 849 aa.
protease	tgf	tgf	FRAMES tgfreceptor
FRAMES HIFT	FRAMES HIFT	FRAMES	FRAMES
Leu (861)	Ala (862)	Ala (863)	Ala (864)
His S	Leu		Ala
<del>-</del>	O	9	၁
gap	gap	gap	gap
GTCAGCCGCTAC CTCGACTGGATCC [gap/TJATGGGCAC ATCAGAGACAAG GAAGC	CCGGCCAGAGCT GCGTCTGCTGAG G[gap/G]CTCAAGT TAAAAGTGGAGCA GCACG	CCGGGCAGAGCT GCGTCTGCTGAG G[gap/G]CTCAAGT TAAAAGTGGAGCA GCACG	AATCTCCGCACTG gap CAGGCCAGGGC [gap/C]TGGCCAGC TACAGAGAGAGG
1536	1317	1317	847
cg44032168 1536	cg43931248	cg43931248	cg43272560
632	633	634	635

1	
φ	2
E-25	1.40E-182
5.20E-254 3	1.40
Human Gene SWISSPROT- ID:P32241 VASOACTIVE INTESTINAL POLYPEPTIDE RECEPTOR 1 PRECURSOR (VIP-R- 1) (PITUITARY ADENYLATE CYCLASE ACTIVATING POLYPEPTIDE TYPE II RECEPTOR) (PACAP TYPE II RECEPTOR) (PACAP-R-2) - HOMO SAPIENS (HUMAN), 457 aa.	Human Gene SWISSPROT- ID:P53611 GERANYLGERANYL TRANSFERASE TYPE II BETA SUBUNIT (EC 2.5.1) (RAB GERANYLGERANYLTRANSFERAS E BETA SUBUNIT) (RAB GERANYL GERANYLTRANSFERASE BETA SUBUNIT) (RAB GG TRANSFERASE) - HOMO SAPIENS (HUMAN), 331 aa.
tm7	transferase
FRAMES tm7	FRAMES HIFT
Gly (865)	Pro (866)
Gly	GB
<b> -</b>	g
gap	gap
CCAGGATCCATTT gap TGAGGATTATGG[ gap/TJGTGCTGGG ACACCATCAACTC CTCA	CAAATCCCCCGT gap TTCTTCATCTTG[g ap/GJACATGCTAA AATGAAATTACGC AGT
1067	625
cg43266471 1067	cg43995237 625
636	637

:

1.40E-182   1	6.40E-257 X	3.80E-252 1	3.80E-252 1
Human Gene SWISSPROT- ID:P53611 GERANYLGERANYL TRANSFERASE TYPE II BETA SUBUNIT (EC 2.5.1) (RAB GERANYLGERANYLTRANSFERAS E BETA SUBUNIT) (RAB GERANYL SUBUNIT) (RAB GG TRANSFERASE) (RAB GGTASE)- HOMO SAPIENS (HUMAN), 331 aa.	Human Gene SWISSPROT- ACC:P78539 SUSHI REPEAT- CONTAINING PROTEIN SRPX PRECURSOR - Homo sapiens (Human), 464 aa.	Human Gene SWISSNEW. ACC:Q13228 SELENIUM-BINDING PROTEIN 1 - Homo sapiens (Human), 472 aa.	Human Gene SWISSNEW- ACC:Q13228 SELENIUM-BINDING PROTEIN 1 - Homo sapiens (Human), 472 aa.
transferase	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI FIED
FRAMES HIFT	FRAMES	FRAMES	FRAMES
(867)	Arg (868)	Leu (869)	Gly (870)
Leu	Arg	Pro	Gly
<u>o</u>	<b>o</b>	gap	deb
gap	gap	<u>ဖ</u>	O
TTCTTCATCTTGA CATGCTAAAATG[g ap/G]AAATTACGC AGTTTCTCTCTAT CAA	CCGCCTCTGCTG CTGCTGCTGCTG C[gap/G]GCGTCCC GCCCAGCCGCAG	ATCCAGGCTGAG CTGGATCATCTGA [G/gap]GGCCTCCA GCCACCCGTTTTC	CCAGGCTGAGCT GGATCATCTGAG G[G/gap]CCTCCAG CCACCCGTTTTCC CTTGA
638	267	965	667
cg43995237		cg44034555	cg44034555
638	639	640	641

	3.2)	(5)		
	1 (1p36.2)	(9922.2)	50	20
1.00E-251	1.00E-201	3.50E-178	3.20E-147	3.20E-147
Human Gene SWISSPROT- ACC:P18428 LIPOPOLYSACCHARIDE-BINDING PROTEIN PRECURSOR (LBP) - Homo sapiens (Human), 481 aa.	Human Gene SWISSPROT- ACC:P18615 RD PROTEIN - Homo sapiens (Human), 380 aa.	Human Gene SWISSPROT- ACC:P09467 FRUCTOSE-1,6- BISPHOSPHATASE (EC 3.1.3.11) (D-FRUCTOSE-1,6- BISPHOSPHATE 1- PHOSPHOHYDROLASE) (FBPASE) - Homo sapiens (Human), 337 aa.	Human Gene Homologous to SPTREMBL-ACC:Q15182 SNRNP POLYPEPTIDE B - HOMO SAPIENS (HUMAN), 285 aa.	Human Gene Homologous to SPTREMBL-ACC:Q15182 SNRNP POLYPEPTIDE B - HOMO SAPIENS (HUMAN), 285 aa.
UNCLASSI FIED	UNCLASSI	UNCLASSI FIED	UNCLASSI FIED	UNCLASSI
FRAMES	FRAMES	FRAMES HIFT	FRAMES	FRAMES HIFT
Gly (871)	Asp (872)	(873)	Leu (874)	Phe (875)
   	Asp	<u>Giy</u>	Pro	Phe
ပ	ပ	gap	gap	gap
gap	gap	O	១	9
AGCGAGTCCTCC GGGAGGCCCACA G[gap/G]TTACTGC CTCCAGCTGCAG CAGTGA	CGTTCCAGAGGA GCATATCTGCTGA [gap/C]TGATGACC TGCAAGAGTCATC CAGA	GGAACTCGAGCA CGTCGTCGGGGG A[C/gap]CCCAAGA TCACCGGCGCCC TCTGGT	ATTCCCGGGGGA GGGGGCCCTGTA A[G/gap]GGAAACC AGACAATCCCATG	TCCCGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG
882	379	306	195	197
cg39711096	cg44128902	cg43946951	cg43948890	cg43948890
642	643	644	645	646

	(c)			
	5 (5q2		2	2
3.20E-143	1.00E-107 5 (5q23)	2.50E-72	5.80E-50	5.80E-50
Human Gene Homologous to TREMBLNEW-ACC:AAD43025 PTD017 - HOMO SAPIENS (HUMAN), 258 aa.	Human Gene Homologous to SWISSNEW-ACC:Q99075 HEPARIN-BINDING EGF-LIKE GROWTH FACTOR PRECURSOR (HB-EGF) (HBEGF) (DIPHTERIA TOXIN RECEPTOR) (DT-R) - Homo sapiens (Human), 208 aa.	Human Gene Similar to SPTREMBL-ACC:060869 EDF-1 PROTEIN - HOMO SAPIENS (HUMAN), 148 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD38944 NJAC PROTEIN - HOMO SAPIENS (HUMAN), 99 aa.	Human Gene Similar to TREMBLNEW-ACC:AAD38944 NJAC PROTEIN - HOMO SAPIENS (HUMAN), 99 aa.
UNCLASSI FIED	UNCLASSI	UNCLASSI	UNCLASSI	UNCLASSI FIED
FRAMES	FRAMES	FRAMES	FRAMES	FRAMES HIFT
Pro (876)	(877)	Gly (878)	Asp (879)	Asp (880)
Ala	Asp	Gly	Gly	GI <sub>y</sub>
gap	Ø	gap	gap	gap
O	dap	S	<u> </u>	၅
GGGCCTGTCTGC CCAGTGGAGGAG G[C/gap]TTCCGCT GGTGTTCTAGGG GGCATC	CTCTCGGCACTG GTGACTGGCGAG A[gap/G]CCTGGAG CGGCTTCGGAGA GGGCTA	TCGTGGCCAGGT CCTTCTGCGTAAG [C/gap]CCCTTGCT CTGCCGACCTTG CTGCGACCTTG	GGTCCAAATGCAA GTGCTCCCGGAA[ G/gap]GGACCCAA GATCCGCTACAG CGACG	TCCAAATGCAAGT GCTCCCGGAAGG[ G/gap]ACCCAAGA TCCGCTACAGCG ACGTG
713	373	681	450	452
cg43917524	cg43942004	cg43932428	cg44010855	cg44010855
647	648	649	650	651